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THE

HISTORY OF PHILOSOPHY

FROM THALES TO COMTE.

BY

GEORGE HENRY LEWES.

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FOURTH EPOCH.

The problem of an external world discussed on psychological data.

CHAPTER I.

BERKELEY.

§ I. LIFE OF BERKELEY.

THERE are few men of whom England has better reason to be proud than of George Berkeley, Bishop of Cloyne. To extraordinary merits as a writer and thinker, he united the most exquisite purity and generosity of character; and it is still a moot point whether he was greater in head or heart.

He was born on the 12th of March, 1684, at Kilcrin, in the county of Kilkenny; and educated at Trinity College, Dublin, where, in 1707, he was admitted as a Fellow. In 1709, he published his *New Theory of Vision*, which made an epoch in Science;* and the year after, his *Principles of Human Knowledge*, which made an epoch in Metaphysics. After this he came to London, where he was received with open arms. 'Ancient learning, exact science, polished society, modern literature, and the fine arts, contributed to adorn and enrich the mind of this accomplished man. All his contemporaries agreed with the Satirist in ascribing

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* It contains one of the most germinal discoveries yet made in Psychology. It is substantially adopted by HELMHOLTZ in his marvellous *Handbuch der physiologischen Optik*, 1867. The late SAMUEL BAILEY some years ago attempted a refutation of it, but his attempt was victoriously defeated by STUART MILL and Prof. FERRIER. Compare BAUMANN: *Die Lehren von Raum, Zeit und Mathematik*, ii. 348-72.

> To Berkeley every virtue under heaven.

Adverse factions and hostile wits concurred only in loving, admiring, and contributing to advance him. The severe sense of Swift endured his visions; the modest Addison endeavoured to reconcile Clarke to his ambitious speculations. His character converted the satire of Pope into fervid praise. Even the discerning, fastidious, and turbulent Atterbury said, after an interview with him, "So much learning, so much knowledge, so much innocence, and such humility, I did not think had been the portion of any but angels, till I saw this gentleman."' *

His acquaintance with the wits led to his contributing to the *Guardian.* He became chaplain and afterwards secretary to the Earl of Peterborough, whom he accompanied on his embassy to Sicily. He subsequently made the tour of Europe with Mr. Ashe; and at Paris met Malebranche, with whom he had an animated discussion on the ideal theory. In 1724, he was made Dean of Derry. This was worth eleven hundred pounds a year to him; but he resigned it in order to dedicate his life to the conversion of the North American savages, stipulating only with the Government for a salary of one hundred pounds a year. On this romantic and generous expedition he was accompanied by his young wife. He set sail for Rhode Island, carrying with him a valuable library of books, and the bulk of his property. But, to the shame of the Government be it said, the promises made him were not fulfilled, and after seven years of single-handed endeavour, he was forced to return to England, having spent the greater part of his fortune in vain.

In 1732 he published a tractate in vindication of his

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* Sir J. Mackintosh.

Theory of Vision.[*] He was made Bishop of Cloyne in 1734. When he wished to resign, the King would not permit him; and being keenly alive to the evils of non-residence, he made an arrangement before leaving Cloyne, whereby he settled 200*l.* a year, during his absence, on the poor. In 1752, he removed to Oxford, where, in 1753, he was suddenly seized, while reading, with palsy of the heart, and died almost instantaneously.

Of his numerous writings we cannot here speak; two only belong to our subject: the *Principles of Knowledge*, and the *Dialogues of Hylas and Philonous.* We hope to remove some of the errors and prejudices with which his name is incrusted. We hope to show that, even in what are called his wildest moods, Berkeley was a plain, sincere, deep-thinking man, not a sophist, playing with paradoxes to display his skill.

§ II. Berkeley and Common Sense.

All the world has heard of Berkeley's Idealism; and innumerable 'coxcombs' have vanquished it 'with a grin.'[†] Ridicule has not been sparing. Argument has not been wanting. Idealism has been laughed at, written at, talked at. It is ludicrous to notice the constant iteration of trivial objections which, trivial as they are, Berkeley had already anticipated. In fact, the critics misunderstood him, and then reproached him for inconsistency—inconsistency, not with *his* principles, but with *theirs.* They forced a meaning upon his words which he had expressly rejected; and then triumphed over him because he did not pursue their principles to the extravagances which would have resulted from them.

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[*] *The Theory of Vision, or Visual Language, shewing the Immediate Presence and Providence of a Deity, vindicated and explained.* This tract, so little known as to have been omitted in his collected works, was reprinted and edited by Mr. H. V. H. Cowell in 1860. (Macmillan & Co.)

[†] 'And coxcombs vanquish Berkeley with a grin.'—Brown: *Essay on Satire.* This verse has so much of the well-known ring of Pope that it is almost universally attributed to him.

When Berkeley denied the existence of matter, he meant by 'matter' that unknown *substratum* the existence of which Locke had declared to be a necessary *inference* from our knowledge of qualities, but the nature of which must ever be altogether hidden from us. Philosophers had assumed the existence of Substance, i.e. of a *noumenon* lying underneath all *phenomena*—a substratum supporting all qualities—a *something* in which all accidents *inhere*. This unknown Substance, Berkeley rejects and replaces by a known Cause, a *spiritual* substance. The substratum, confessedly unknown, is a mere abstraction, he says. If it is unknown, unknowable, it is a figment, and I will none of it; for it is a figment worse than useless; it is pernicious, as the basis of all atheism. If by matter you understand *that* which is seen, felt, tasted, and touched, then I say matter exists: I am as firm a believer in its existence as anyone can be, and *herein I agree with the vulgar.* If, on the contrary, you understand by matter that occult *substratum* which is *not* seen, *not* felt, *not* tasted, and *not* touched—that of which the senses do not, cannot, inform you—then I say I believe not in the existence of matter, and *herein I differ from the philosophers and agree with the vulgar.*

'I am not for changing things into ideas,' he says, 'but rather ideas into things; since those *immediate objects of perception* which, according to you (Berkeley might have said, according to all philosophers), are only *appearances of things*, I take to be the real things themselves.

'*Hylas.* Things! you may pretend what you please: but it is certain you leave us nothing but the empty forms of things, the *outside of which only strikes the senses.*

'*Philonous.* What you call the empty forms and outside of things seem to *me* the very things themselves. . . . We both therefore agree in this, that we perceive only sensible forms; but herein we differ: you will have them to be empty appearances; I, real beings. In short, *you do not trust your senses; I do.*'

Berkeley is always accused of having propounded a theory which contradicts the evidence of the senses. That a man who thus disregards the senses must be out of his own, was a ready answer; ridicule was not slow in retort; declamation gave itself elbow-room, and exhibited itself in a triumphant attitude. It was easy to declare that 'the man who seriously entertains this belief, though in other respects he may be a very good man, as a man may be who believes he is made of glass; yet surely he hath a soft place in his understanding, and hath been hurt by much thinking.' *

Unfortunately for the critics, Berkeley did *not* contradict the evidence of the senses; in denying a *substratum*, he did *not* propound a theory at variance with the ordinary belief of mankind. His peculiarity is that herein he confined himself exclusively to the evidence of the senses. What the senses informed him of, that, and *that only*, would he accept. He held fast to the facts of consciousness; he placed himself resolutely in the centre of the instinctive belief of mankind: there he took his stand, leaving to philosophers the region of supposition, inference, and of occult substances.

The reproach made to him is really the reproach he made to philosophers, namely, that they would not trust to the evidence of their senses; that over and above what the senses told them, they imagined an occult something of which the senses gave no indication. 'Now it was against this metaphysical phantom of the brain,' says an acute critic, 'this crotchet-world of philosophers, and against it alone, that all the attacks of Berkeley were directed. The doctrine that the realities of things were not made for man, and that he must rest satisfied with mere appearances, was regarded, and rightly, by him, as the parent of scepticism with all her desolating train. He saw that philosophy, in giving up the reality immediately within her grasp, in favour of a reality supposed to be less delusive, which lay beyond the limits of experience, resembled the dog in the fable, who, carrying a piece of meat across a river, let the substance slip from his jaws, while with foolish greed he snatched at the shadow in the stream. The dog lost his dinner, and philosophy let go her secure hold upon truth. He therefore sided with the vulgar who recognise no distinction between the reality and the appearance of objects, and, repudiating the baseless hypothesis of a world existing unknown and unperceived, he resolutely maintained that what are called the sensible shows of things are in truth the very things themselves.' *

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* Reid: *Inquiry*.

True it is that, owing to the ambiguities of language, Berkeley's theory does seem to run counter to the ordinary belief of mankind, because by Matter, men commonly understand the Seen, the Tasted, the Touched, etc.; therefore when the existence of Matter is denied, people naturally suppose that the existence of the Seen, the Tasted, and the Touched is denied; never suspecting that Matter, in its philosophical sense, is the *not* seen, *not* tasted, *not* touched. Berkeley, it must be confessed, has insufficiently guarded against all ambiguity. Thus he says in one of the opening sections of his *Principles of Human Knowledge,* that 'It is indeed *an opinion strangely prevailing amongst men* that houses, mountains, rivers, and, in a word, all sensible objects, have an existence, natural or real, distinct from their being perceived by the understanding.' This is striking a false key-note. It rouses the reader to oppose a coming paradox. Yet Berkeley foresaw and answered the objections which Wimpey, Beattie, Reid, and others brought forward. He was not giving utterance to a caprice; he was not spinning an ingenious theory, knowing all the while that it was no more than an ingenuity. He was an earnest thinker, patient in the search after truth. Anxious, therefore, that his speculations should not be regarded as mere dialectical displays, he endeavoured on various occasions to guard himself from misapprehension.

'I do not argue against the existence of any one thing that we can apprehend either by sensation or reflection. *That the things I see with my eyes and touch with my hands do exist, really exist, I make not the least question. The only thing whose existence I deny is that which philosophers call Matter, or corporeal substance.* And in doing this there is no damage done to the rest of mankind, who, I dare say, will never miss it. . . .

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* *Blackwood's Mag.* June 1842, p. 814, art. 'Berkeley and Idealism;' by Professor FERRIER: since reprinted in his *Lectures on Greek Philosophy, and other Philosophical Remains,* edited by GRANT and LUSHINGTON, 1866, vol. ii. p. 291.

'If any man thinks we detract from the reality or existence of things, he is very far from understanding what has been premised in the plainest terms I could think of. . . . It will be urged that thus much at least is true, viz. that we take away all corporeal substances. To this my answer is that, if the word *substance* be taken in the vulgar sense, for a combination of sensible qualities, such as extension, solidity, weight, etc., this we cannot be accused of taking away.* But if it be taken in the philosophic sense, for the support of accidents or qualities without the mind; then, indeed, I acknowledge that we take it away, if one may be said to take away that which never had any existence, not even in the imagination.† But say what we can, some perhaps may be apt to reply, he will still believe his senses, and never suffer any arguments, however plausible, to prevail over the certainty of them. Be it so: assert the evidence of sense as high as you please, *we are willing to do the same.* That what I see, hear, and feel, doth exist, i.e. is perceived by me, I no more doubt than I do of my own being; *but I do not see how the testimony of sense can be alleged as a proof of anything which is not perceived by sense.'*‡

After reading these passages (and more of a similar cast might be quoted), in what terms shall we speak of the works written to refute Idealism? Where was the acuteness of the

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* An answer to Dr. JOHNSON's peremptory refutation of BERKELEY, viz. kicking a stone: as if Berkeley ever denied that what we called stones existed!

† This is not well said. That substance was *imagined* to exist (as a support of accidents), Berkeley's argument supposes: it is against such an imaginary existence he directs his attacks. Perhaps he means that no *image* of substance could be formed in the mind: which no one disputes.

‡ *Principles of Human Knowledge*, §§ 35–37, 40.

Reids and Beatties, when they tauntingly asked why Berkeley did not run his head against a post, did not walk over precipices, etc., as, in accordance with his theory, no pain, no broken limbs, could result?* Where was philosophical acumen, when writers could imagine they refuted Berkeley by an appeal to common sense—when they contrasted the instinctive beliefs of mankind with the speculative paradoxes of a philosopher, who expressly took his stand beside common sense against philosophers?

Men trained in metaphysical speculations may find it difficult to conceive the non-existence of an invisible unknowable substratum; but that the bulk of mankind find it almost impossible to conceive any such substratum is a fact which the slightest inquiry will verify.

Berkeley, therefore, in denying the existence of Matter, sided with common sense. He thought, with the vulgar, that Matter was *that* of which his senses informed him; not an occult something of which he could have no information. The table he saw before him certainly existed: it was hard, polished, coloured, of a certain figure, and cost some guineas. But there was no *phantom table* lying underneath the *apparent table*—there was no invisible substance supporting that table. What he perceived was a table, and nothing more; what he perceived it to be, he would believe it to be, and nothing more. His starting-point was thus what the plain dictates of his senses, and the senses of all men, furnished.

§ III. IDEALISM.

The first step which a philosopher takes in any inquiry is a departure from Common Sense. Reflecting upon what his senses convey to him, he seeks an explanation of phenomena: and it is in proportion to the care with which he analyses the facts to be explained that he is usually supposed to be free from the mere extravagances of speculation. And yet Berkeley's analysis of the facts of Consciousness (as Consciousness is commonly understood by philosophers) has obtained for him the reputation of being one of the most extravagant of speculators.

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* 'But what is the consequence? I resolve not to believe my senses? I break my head against a post that comes in my way: I step into a dirty kennel; and after twenty such wise and rational actions I am taken up and clapt into a madhouse. Now I confess I had rather make one of those credulous fools whom nature imposes upon than of those wise and rational philosophers who resolve to withhold assent at all this expense.'—REID: *Inquiry*, ch. iv. § 20. This one passage is as good as a hundred.

This is the problem: our senses inform us of certain sensible qualities, such as extension, colour, solidity, etc. But Logic declares that these qualities must be qualities *of* something: they cannot exist as mere extension, colour, etc.: there must be something extended, coloured, etc. What is that something? The solution given by the philosophers was uniformly this: *what* that substance is, we can never know, because it lies beyond our apprehension; but we are forced to admit it, as a support to the qualities which we do apprehend, as a substance in which sensible qualities inhere. So that, deeply considered, the only reason for inferring the existence of Matter is *the necessity for some synthesis of attributes.*

Now, what did Berkeley? With very subtle perception of the difficulties of the problem, he boldly solved it by *making the synthesis a mental one.* Thus was Matter, the substratum, wholly got rid of.

The nature of human knowledge is the first object of his inquiry. 'It is said that the faculties we have are few, and those designed by Nature for the support and pleasure of life, and not to penetrate into the inward essence and constitution of things. Besides, the mind of man, being finite, when it treats of things which partake of infinity, it is not to be wondered at if it run into absurdities and contradictions, out of which it is impossible it should ever extricate itself, it being of the nature of infinite not to be comprehended by that which is finite.'

This is plainly enough launched at Locke; but the worthy Bishop has no such disposition 'to sit down in quiet ignorance.' He suspects that 'we may be too partial in placing the fault originally in our faculties, and not rather in the wrong use we make of them.' He believes that God is too bountiful not to have placed knowledge within our reach of which He has given us the desire. (Berkeley here disregards the lesson man was taught in Paradise, where the Tree of Knowledge was placed within his reach, but the fruits thereof forbidden him.) 'Upon the whole,' continues Berkeley, 'I am inclined to think that the far greater part, if not all, the difficulties which have hitherto amused philosophers, and blocked up the way to knowledge, are entirely owing to themselves. That we have first raised a dust, and then complain we cannot see.'

The pretension on which all Ontology is founded is here openly proclaimed. The consequences of Locke's doctrine are rejected; the premisses are retained. Berkeley's account of the origin of knowledge is the same as Locke's, only somewhat more explicitly defined. But the student must be warned against the common mistake of supposing that Locke ignored the part played by what have been called *à priori* notions. Among these notions are Substance and Cause; it is on these Berkeley relies. 'The mind, her acts, and faculties,' he says,* 'furnish a *new and distinct class of objects*, from the contemplation whereof arise certain other notions, principles, and varieties, so remote from and even so repugnant to the first prejudices which surprise the sense of mankind, that they may well be excluded from vulgar speech and books, as abstract from sensible matter, and more fit for the speculation of truth, the labour and aim of a few, than for the practice of the world.' In an earlier paragraph he speaks of the objects of sense as what the mind first regards as realities; but no sooner does intellect dawn upon the shadowy scene, 'than we perceive the true principle of unity, identity, and existence. Those things which before seemed to constitute the whole of being, upon taking an intellectual view of things [i.e. viewing them as conceptions] prove to be but fleeting phantoms.'

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* BERKELEY: *Siris*, § 297.

In presence of such declarations, Professor Frazer declares that Berkeley 'not only was not a sensualist of the school of Condillac, not only not an empiricist of the school of Hume, but he was a transcendentalist of the highest and purest school of Kant. With Kant he held the intellectual origin of certain concepts. With Kant he held the dependence of these concepts for their development on sense. With Kant he even discriminated the peculiar functions of sense and intellect; the one as the source of intuition, and the other as the source of thought. Nay, with Kant he held that space had no objective reality, but was "a child of the imagination grafted upon sense;" and he expresses the same opinion with respect to the objective reality of time.' *

The student of Berkeley will remark that the *objects* of knowledge are said to be *ideas.* This has a paradoxical air to those unaccustomed to metaphysics, yet it is the simple expression of the facts of consciousness. All that the mind can be conversant about is its ideas: we are conscious of nothing but the changes that take place in our minds. Whether these ideas are the *copies* or *representatives* of any *things*—whether changes in our state are to be attributed to any external *cause*: this is a question of Philosophy —a question which Common Sense makes no scruple of begging. You see before you a flower, and you assume that an external thing resembling that flower exists, and that your sensation is produced by it, as a reflection in a mirror is produced by an object out of the mirror. But dive deeper into consciousness, interrogate yourself, and you will find that the comparison of the mirror is an assumption made only to explain the facts of consciousness, not given *in* those facts. Moreover, granting the assumption, you will then make the mind immediately conversant with its ideas *only*; for assuming that objects reflect themselves in the mirror, the mirror itself knows only the reflections: these it knows immediately; the objects it knows mediately, i.e. through the reflections. Thus is Berkeley keeping rigorously to the facts of consciousness when he says that the 'objects of knowledge are ideas.'

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* *Berkeley's Idealism,* in the *North British Review,* lxviii. p. 475; on the whole, the most luminous essay on Berkeley which has come under my notice. What is said, however, respecting the agreement with Kant's views on Space and Time must be accepted with a reservation. Berkeley held all objective reality to be subjective, but he did not hold Space and Time to be special forms of Intuition.

Were not the history of Philosophy crowded with similar examples, we might feel surprised at the strange misconception of Berkeley, which has become traditional, through Reid, Stewart, Brown, nay, even Hamilton and Mansel, and which Professor Frazer was, I believe, the first to point out—namely, the misconception of Berkeley's theory of ideas. These writers suppose him to have held that ideas are intermediate entities, distinct from the human intellect no less than from the divine, mediating between the two. The same mistake has been even more widely prevalent respecting Aquinas.* 'The entity-idea was invented as a mediator between mind and matter. What occasion, therefore, could there be for a mediator when the existence of matter was denied?' The source of the misconception is, no doubt, the employment of the word idea to signify the *object* of consciousness; though a glance at Arnauld would have revealed that 'objective' in those days meant the mental presence of a thought, as distinguished from the local presence of a thing; and a glance at one of Berkeley's precursors now seldom read—John Serjeant†—would have revealed that the word object signified thing meant—'Now the Meanings of Words, or (which is the same, taking that word *objectively*, what's meant by those words).' Thus in calling ideas 'objects' Berkeley was following in the track of his predecessors and contemporaries. 'We know that not only can we perceive,' says Professor Frazer, 'but that we can make our perception an object of ulterior thought; and hence, though philosophers while concentrating their attention on the act have called it a *perception*, yet when regarding it as an object they have named it an *idea*'—a point overlooked by Reid. 'Berkeley, it is true, describes our ideas as "real beings," as "objects of knowledge," as "things which exist whether we think on them or not." But he distinctly repudiates the monstrosity attributed to him by Reid, Stewart, Brown, Hamilton, and Mansel. What, in fact, is the fundamental principle of his philosophy? It is that "the *esse* of every idea is *percipi*;" that "it is not possible to separate, even in thought, any of our ideas from *perception*." As, when speaking of those ideas as inert, fleeting, and dependent beings, he tells us that they "subsist not by themselves, but are supported by, or exist in, minds or spiritual substances," so, when speaking of them as "real things," he states that "their being consists in being perceived."'

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* Comp. HAURÉAU, *Hist. de la Phil. scholastique*, ii. 177, and ROUSSELOT, *Études sur le Moyen Âge*, ii. 250.

† *Solid Philosophy asserted against the Fancies of the Ideists*, 1697.

While on this topic, I may observe that one great purpose of Berkeley was to bring prominently forward those notions, concepts, which Locke had left too much in the background. In doing this he had to reject the ideal theory which he is popularly supposed to have embraced, and to deny, not only that ideas were entities, mediates, but also that they were copies of or resemblances of things.*

From this digression let us pass to remark on Berkeley's use of the word idea, which stands both for sensation and idea. We cannot but regard this confusion of language as the cause of no little misapprehension of his doctrines. 'That neither our thoughts, nor passions, nor the ideas formed by our imagination, exist without the mind is what everybody will allow; and to me it is no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (*that is, whatever objects they compose*), cannot exist otherwise than in a mind perceiving them. . . . The table I write on, I say, exists, i.e. I see it, and feel it, and if I were out of my study, I should say it existed; meaning thereby that, if I was in my study, I might perceive it, or that some other spirit actually does perceive it. As to what is said about the existence of unthinking things, without any relation to their being perceived, that is to me perfectly unintelligible. Their *esse* is *percipi*; nor is it possible they should have any existence out of the minds or thinking things which perceive them.'

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* On this point I would gladly quote the remarks of Serjeant, *Solid Philosophy* (Preface), but cannot afford the requisite space.

It is in this last paragraph that the kernel of his system lies. He had identified objects with ideas: having done so, it was easy to prove that objects could not exist without a perceiving mind *in* which to exist as ideas. 'For what are the objects but the things which we perceive by sense?' Realism assents: objects are what we perceive. 'And *what*, I pray you,' continues Berkeley, 'do we perceive besides our own ideas or sensations?' Realism hesitates; certainly the mirror has nothing immediately present to it besides the reflections. 'And is it not plainly repugnant,' triumphantly continues Idealism, 'that any one of these ideas, or any combination of them, should exist unperceived?' Realism has no answer to offer. It is in a dilemma from which there is apparently no escape.

The supposition of the existence of Matter is founded on the doctrine of abstract ideas (against which Berkeley wages war). 'For can there be a nicer strain of abstraction than to distinguish the existence of sensible objects from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and figures—in a word, *the things we see and feel*—what are they but so many sensations, notions, ideas, or impressions on the sense; *and is it not impossible to separate, even in thought, any of these from perception*? For my part, I might as easily divide a thing from itself. I may indeed divide in my thoughts, or conceive apart from each other, those things which perhaps I never perceived by sense so divided. Thus I imagine the trunk of the human body without the limbs, or conceive the smell of a rose without thinking of the rose itself. So far I will not deny that I can abstract, if that be properly called abstraction which extends only to the conceiving separately such objects as it is possible may really exist, or be actually perceived asunder; but my conceiving or imagining power does not extend beyond the possibility of real existence or perception. Hence, as it is impossible for me to see or feel anything without an actual sensation of that thing, so it is impossible for me to conceive in my thoughts any sensible thing or object distinct from the sensation or perception of it. In truth, the object and the sensation are the same thing, and cannot therefore be abstracted from one another. . . . .

'In a word, all the choir of heaven and furniture of earth —all those bodies which compose the mighty frame of the world—have not any subsistence without a mind: their *esse* is to be perceived or known; and consequently, so long as they are not actually perceived by me, or do not exist in my mind, or that of any other created spirit, they must either have no existence at all, or else subsist *in the mind of some eternal spirit*. . . .

'Though we hold indeed the objects of sense to be nothing else but ideas which cannot exist unperceived, yet we may not hence conclude they have no existence except only while they are perceived by us, since there may be some other spirit that perceives them, though we do not. Whenever bodies are said to have no existence without the mind, *I would not be understood to mean this or that particular mind, but all minds whatsoever.* It does not therefore follow that bodies are annihilated and created every moment, or exist not at all during the intervals between our perception of them. . . .

'I am content to put the whole upon this issue: if you can but conceive it possible for one extended movable substance, or in general for any one idea, or anything like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause; I shall grant you its existence, though you cannot either give me a reason why you believe it exists, or assign any use to it when it is supposed to exist. I say the bare possibility of your opinion being true shall pass for an argument that it is so.

'But say you, surely there is nothing easier than for me to imagine trees in a park, or books in a closet, and nobody by to perceive them. I answer, you may so: there is no difficulty in it. But what is all this, I beseech you, more than *framing in your mind certain ideas* which you call books and trees, and at the same time *omitting to frame the idea of anyone perceiving them*?

'But do not *you yourself perceive or think of them all the while*? This therefore is nothing to the purpose: it only shows you have the power of imagining or framing ideas in your mind, but it does not show that you can conceive it possible the objects of your thought may exist without the mind. To make out this, it is necessary that you conceive them existing unperceived or unthought of, which is a manifest repugnancy. When we do our utmost to conceive the existence of external bodies, we are *all the while only contemplating our own ideas.*' *

The last very remarkable passage must have been overlooked by the critic before mentioned, otherwise he would not have said that the 'knot which Berkeley loosened, but which he certainly did not explicitly untie,' was to be resolved, for the first time, by the arguments he there brings forward. Berkeley had untied the knot, explicitly, satisfactorily; and that too in the same way as his critic.†

The distinction between *primary* and *secondary* qualities Berkeley easily refutes, and shows that the same arguments which make the secondary qualities to be only affections of the mind may be applied to the primary qualities.

Having battered down almost every objection, trivial or serious, that could be offered, Idealism iterates its fundamental principle:—All our knowledge of objects is a knowledge of ideas; objects and ideas are the same. *Ergo*, nothing exists but what is perceived.‡

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* The foregoing passages are all taken from the *Principles of Human Knowledge*, §§ 5, 6, 8, 22, and 23.

† See the article in *Blackwood*, already cited, p. 817, *et seq.*; *Lectures*, ii. p. 308.

‡ Nothing can be more inaccurate than to class BERKELEY among those who maintain ideas to be representative of things; ideas, he says, are things. Yet HAMILTON commits this inaccuracy.

Realism espies a loophole. These ideas, with which we admit the mind to be solely conversant, are but the ideas (images) of certain things: these things exist independently of being perceived, though their ideas cannot. Berkeley foresaw this also. 'But, say you, though the ideas themselves do not exist without the mind, yet there may be things like them whereof they are copies or resemblances, which things exist without the mind in an unthinking substance. I answer, *an idea can be like nothing but an idea*; a colour or figure can be like nothing but another colour or figure. Again, I ask whether those supposed originals or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? If they are, then they are ideas, and we have gained our point; but if you say they are not, I appeal to anyone whether it be sense to assert a colour is like something which is invisible; hard or soft, like something which is intangible?' (Sect. 8.)

As far as the metaphysical conception of Consciousness extends, the analysis given by Berkeley is unimpeachable, unless we deny that Consciousness is immediately affected by sensations, and assert that it is immediately affected by external objects; but no metaphysician will take up this position, for it would lead him to maintain that Consciousness *is* nothing but these very sensations, which are produced in the organism by the action of external influences; and this would be getting rid of the substratum Mind, in order to rescue the substratum Matter. No metaphysician therefore ever could, logically, object to Berkeley's fundamental position; but only tried to elude it, or make it open into other issues.

The question whether Consciousness is anything over and above its acts, whether in Sensation and Ideation there is feeling *and* consciousness of feeling, thinking *and* consciousness of thinking, or whether the two phrases express but one fact, has been considered settled by modern psychologists, since Brown. Yet the whole notion of a duplicate consciousness, attendant upon each act of consciousness (a feeling of feeling, to translate it into precise language), still crops up, even in modern speculations.

The real battlefield is, therefore, that of Dualism. Are there two distinct existences, Mind, on the one hand, and Matter, on the other; Mind in no respect allied with Matter, yet acted on by it, and representing it? The Idealist says: There is but one existence, Mind. Analyse the concept Matter, and you will discover that it is nothing but a synthesis of qualities; the qualities are sensations, the synthesis is mental.

The Realist, if consequent, will say, There is but one existence, Matter. Analyse your concept of Mind, and you will discover that it is nothing but a synthesis of qualities (states of consciousness); the qualities are activities of the vital organism; the synthesis is the organism.

The Sceptic agrees with both, and disagrees with both, and says: Your Matter is but a fleeting succession of phenomena, your Mind is but a fleeting succession of ideas.

The Dualist says: There is but Mind and Matter; the two are in essence distinct, and never can be brought into union; but the Mind has the capability of being acted on by Matter, the result of which is a representation within it of that which is without it; and it has, moreover, a power of acting on Matter, the result of which is—I don't exactly know what, but, at any rate, it is indicated by certain motions of Matter. If you ask me, How two existences thus essentially distinct, having no quality in common, can nevertheless act on each other? I answer: It is a mystery.

A mystery, no doubt. But Philosophy cannot be satisfied with phrases. It wants precise data. The dualistic hypothesis has the disadvantage of introducing two factors, without in the least assisting us. Idealism taking firm hold of one of these factors, Mind, explains phenomena quite as lucidly as Dualism with its two factors. Realism does the same with its one factor, Matter. Philosophy has to decide between them.

Berkeley has far better reasons for his opinion than his critics generally imagine. He could not see the force of the argument which made Matter the substratum a necessary postulate. That we *could* have sensations and ideas without the presence of external objects is manifest from the fact that we *do* often have them, as in dreams and frenzies. If therefore Matter is not always necessary for the production of ideas—if ideas can be sometimes produced without the presence of external objects—the pretended necessity, which alone forms the argument for the existence of Matter, is done away with.

'But though,' he says, 'we might possibly have all our sensations without bodies, yet perhaps it may be thought easier to conceive and explain the manner of their production by supposing external bodies in their likeness rather than otherwise, and so it might at least be probable there are such things as bodies that excite ideas in our minds. But neither can this be said, for though we give the Materialists their external bodies, they, by their own confession, are never nearer the knowing how our ideas are produced, since they own themselves unable to comprehend in *what manner body can act upon spirit*, or how it is possible it should imprint an idea in the mind.'

We have here the difficulty stated, which most Dualists (those who maintain the existence of spirit and matter, as distinct substances) have not been sufficiently alive to; it is that which gave rise to Leibnitz's theory of pre-established harmony, and to Malebranche's theory of our seeing all things in God. This difficulty is indeed insuperable. It is easy to talk of the spirit being a mirror in which the universe reflects itself. Try for an instant to imagine a substance reflecting itself in, or acting upon, another substance having no one property in common with it. You cannot. Nor is this all: you cannot even imagine two substances so distinct as Matter and Spirit are defined to be: Spirit always presents itself to imagination as an attenuated Matter.

Berkeley then is right in triumphing over Realism and

Dualism. Right in saying that, if he were to accord them the existence of Matter, they could make no use of it. The subject would remain as dark as before: Matter throws no light on it. He maintains that our ideas are produced in us conformably with the laws of Nature. These laws have been ordained by God. To suppose that Matter is the mere occasional cause—*the vehicle through which the laws of Nature operate*—is gratuitous. The existence of Matter cannot be established either by intuition or by inference; the notion is full of contradictions. Whereas the existence of Spirit is known directly; and Spirit is God. The agency of the Creator is therefore more simple and direct. He had no need of creating first laws, and afterwards Matter, through which these laws should come into effect. He thought, and his thought reflected itself in us directly, without the superfluous aid of Matter as a mere go-between.

Mr. Herbert Spencer has argued that Berkeley's hypothesis is a logical suicide; that the Universal Postulate, or the fundamental assumption which is itself the ultimate test of every speculation, namely, the inconceivability of the negative, is violated by Idealism. But an Idealist might reply: All that your Postulate implies is that Something external to my consciousness exists; Something which is not me, but affects me. I admit this. I admit the existence of Ideas, but I admit the existence of nothing answering to the Ideas—nothing *behind* them. They are all the reality which God excites in me; and they are only that.

What, then, is granted? That Something, a Non-ego, exists. I cannot know this Something otherwise than under the subjective conditions of knowledge; it is to me what I know it; where the Ego ends, the Non begins. I am quite at liberty to suppose this Something to be only the Mode in which, and through which, the Deity affects me. You would also be at liberty to suppose it to be self-existent Matter; only that supposition leads to atheism, and is therefore convicted of error.

Now, as an inference—as an hypothesis—few thoroughly acquainted with the question, and with the data on which it was founded, can, we think, deny that this of Berkeley is many degrees superior to the hypothesis of Dualism. While most philosophers teach that there are two distinct eternal substances, which they name Spirit and Matter, Berkeley teaches that there is only *one* substance, viz. Spirit. With this one substance he can construct the world. According therefore to the fundamental rule in philosophy, that 'Entities or existences are not to be multiplied unless upon necessity' (*entia non sunt multiplicanda præter necessitatem*), the introduction of a second substance, Matter, is superfluous, or worse. Of its existence we have no proof whatever: it is a mere inference; it is inferred in order to explain the phenomena: and what phenomena? those of perception—i.e. the phenomena of the thinking substance.

If, then, Berkeley is more rigorous in his analysis of facts, and more ingenious and plausible in his hypothesis, than his antagonists suppose, shall we pronounce his Idealism satisfactory and true?

Hume said of it that it admitted of no answer, but produced no conviction. And there has been no final refutation of it. Yet, inasmuch as the irresistible belief of mankind is that objects are not dependent for their existence either upon our perception of them nor upon the perception of any other mind—that objects exist *per se*, and would continue to exist if all minds were annihilated—Berkeley's theory never can produce conviction. Reid was right in standing by this universal and irresistible belief. He was egregiously wrong, however, in supposing that he answered Berkeley by an appeal to this irresistible belief. This appeal, so loudly proclaimed by the Scotch school,* is rejected by several thinkers. The belief that the sun revolved round the earth was for many centuries irresistible, and false. Why may not Berkeley have been a metaphysical Copernicus, who, by rigorous demonstration, proved the belief of mankind in the existence of Matter to be irresistible and false? Reid has no answer to give. He can merely say, 'I side with the vulgar;' but he might have given the same answer to Copernicus. Many illustrious men (Bacon among them) ridiculed the Copernican theory: but all the dogmatism, ridicule, and common sense in the world could not affect that theory. Why, we repeat, may not Berkeley have been a metaphysical Copernicus?

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* Especially by Dr. BROWN, who says that the 'sceptical argument for the non-existence of an external world, as a mere play of reasoning, admits of no reply.' The only reply he makes is that the belief was irresistible. HUME had already admitted that the belief was irresistible; the whole scope of his philosophy was to prove it both irresistible and *false*. How absurd then to appeal to the belief! KANT truly observes, in the preface to his *Kritik*, 'Admitting Idealism to be as dangerous as it really is, it would still remain a shame to philosophy and reason to

To prove that he was not, you must prove his reasoning defective; to prove this, you must show wherein his error lies, and not wherein his theory is at variance with your belief. All that your irresistible belief amounts to is that of a strong, a very strong, presumption against the truth of hat which opposes it. Reid, in accepting this presumption as a proof, was in the right so long as Berkeley's reasoning was not strong enough to overcome it: but singularly wrong in supposing that the presumption was a refutation.

Berkeley's main position is that the *objects of knowledge are ideas, and nothing but ideas.* The position is incontrovertible. The conclusion therefore: *all human knowledge can only be the knowledge of ideas, and of nothing but ideas,* is equally incontestable. Not less so the second conclusion: *objects being identified with ideas, and we having no idea of an object but as it is perceived, the* ESSE *of objects to us is* PERCIPI.

In admitting all this, what do we admit? Simply that human knowledge is not the 'measure of all things.' Objects *to us* can never be more than ideas; but are *we* the final measure of all existence? Because we can only *know* objects as ideas, is it a proper conclusion that objects only *exist* as ideas? Objects subtend certain angles to our consciousness: because we can only see them under these angles, is it logical

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be forced to ground the existence of an external world on the (mere) evidence of belief.' The more so as the fact of belief had never been questioned. The question was, Is the belief well grounded?

to conclude that they are only these angles? For this conclusion to be rigorous, we must have some proof of our knowledge being the absolute standard of *things existent,* not simply of *things known.*

The Idealist will say: 'If you cannot *know* anything beyond your ideas, why do you infer that there *is* anything?' —A question not easily answered. He will, moreover, say: 'I defy you to conceive anything existing unperceived. Attempt to imagine the existence of matter when mind is absent. You cannot, for in the very act of imagining it, you include an *ideal percipient.* The trees and mountains you imagine to exist without any perceiving mind, what are they but the very ideas of *your* mind, which you transport to some place where you are not? In fact, to separate existence from perception is radically impossible. It is God's synthesis, and man cannot undo it.'*

To this one may answer, It is very true that, inasmuch as our knowledge of objects is identical with our ideas, we can never, by any freak of thought, imagine an object *apart from the conditions under which we know it.* We are forced by the laws of our nature to invest objects with the forms in which we perceive them.† We cannot therefore conceive anything which has not been subject to the laws of our nature, because in the very act of conception those laws come into play. But is it not a very different proposition to say, 'I cannot conceive things otherwise than according to the laws of my nature,' and to say, 'I cannot conceive things otherwise, *consequently* they cannot exist otherwise?' The Idealist here assumes that knowledge is absolute, not relative—that man is the measure of and comprehends all things; which may be likened to the assertion that no raw material exists, only manufactured goods.

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* See this argued in a masterly manner by the critic in *Blackwood,* before quoted.

† 'When in perception,' says SCHELLING, 'I represent an object, *object and representation are one and the same.* And simply in this our inability to discriminate the object from the representation during the act lies the conviction which the common sense of mankind has of the reality of external things, although these become known to it only through the representations.'—*Ideen zu einer Philos. der Natur,* Einleitung, p. xix. (quoted by Sir W. HAMILTON). This is indisputable, but it is only saying that our knowledge of things is subject to the conditions of knowledge. Because *we* cannot discriminate between the object and the representation, it is no proof that there is no distinction between them.

Psychology declares that Perception is the *identity* of the ego and the non-ego—the relation of two terms, the *tertium quid* of two united factors; as water is the identity of oxygen and hydrogen. The ego can never have any knowledge of the non-ego in which it (the ego) is not indissolubly bound up; as oxygen can never unite with hydrogen to form water without merging itself and the hydrogen in a *tertium quid*. Let us suppose the oxygen to be a process of consciousness, i.e. a feeling of changes. It would attribute the change *not* to hydrogen, which is necessarily hidden from it, *but to water*, the only form under which hydrogen is known to it. In its consciousness it would find the state named water, which would be very unlike its previous state; and it would suppose that this state, so unlike the previous one, was a representation of that which caused it. We say then that, although the hydrogen can only exist for the oxygen (in the above case) in the identity of both as water, this is no proof that hydrogen does not exist under some other relations to *other* gases. There are hydrocarbons and hydrochlorates as well as oxides of hydrogen. In like manner, although the non-ego cannot exist in relation to Mind otherwise than in the identity of the two (perception), this is no proof that it does not exist in relation to other Existences under quite different conditions.

In conclusion, we admit, with the Idealists, that all our *knowledge* of objects consists in our ideas. But we cannot admit that all existence is comprehended by our knowledge, merely on the ground that, when we would conceive anything existing, we are forced to conceive it in accordance with the laws of human faculties. We admit, with the Idealists, that our knowledge is *subjective*. But we do not admit that what is true subjectively is true comprehensively of all existence. We believe in the existence of an external quite independent of any percipient; the arguments by which Idealism would controvert it are vitiated by the assumption of knowledge being a criterion of existence. Idealism agrees with Realism in placing reliance on the evidence of consciousness; it argues however that, inasmuch as our *knowledge* is confined to ideas, we have no right to assume anything beyond ideas. Yet it also is forced to assume something as the cause of ideas: this cause it calls the Action of the Creator; and this is an assumption. In Berkeley's *Vindication of the Theory of Vision,* there occur these explicit passages: 'The objects of sense, being things immediately perceived, are otherwise called *ideas.* The cause of these ideas, or the *power of producing them,* is not the object of sense, not being itself *perceived but only inferred* by reason from its effects, to wit, those objects or ideas which are perceived by sense. From our ideas of sense the inference of reason is good to Power, Cause, Agent. But we may not, therefore, infer that our ideas are like unto this Power, Cause, or active being. On the contrary, it seems evident that an idea can only be like another idea, and that in our ideas or immediate objects of sense, there is nothing of Power, Causality, or Agency included. Hence it follows that the Power or Cause of ideas is not an object of Sense but of Reason. Our knowledge of the Cause is measured by the Effect; of the Power by our Idea. To the absolute nature, therefore, of outward Causes or Powers, we have nothing to say; they are no objects of our sense or perception. Whenever, therefore, the appellation of sensible *object* is used in a determined intelligible sense, it is not applied to signify the *absolutely existing outward Cause* or Power, but the ideas themselves produced in us. Ideas which are observed to be connected together are vulgarly considered under the relation of cause and effect; whereas, in strict philosophic truth, they are only related as the sign to the thing signified. For we know our Ideas; and therefore know that one Idea cannot be the cause of another. We know that our ideas of sense are not the cause of themselves. We know also that we do not cause them. Hence we know that they must have some other efficient cause, distinct from them and us.' *

Again: 'The real objects of sight we see, and what we see we know. And these true objects of sense and knowledge, to wit, our own ideas, are to be considered, compared, distinguished, in order to understand the "True Theory of Vision" as to the outward cause of these ideas: whether it be one and the same, or various and manifold; whether it be thinking or unthinking, spirit or body, or whatever else we conceive about it, the visible appearances do not alter their nature, our ideas are still the same. Though I may have an erroneous notion of the cause, or though I may be utterly ignorant of its nature, yet this does not hinder my making true and certain judgments about my ideas; my knowing which are the same and which different; which are connected together, and wherein this connection consists; whether it be founded in a likeness of nature, in a geometrical necessity, or merely in experience and custom.'*

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* *The Theory of Vision Vindicated,* pp. 20–28.

It thus clearly appears that Berkeley, in common with philosophers and ordinary men, admitted the existence of an external something as the cause of sensations, *which sensations constitute the objects to us.* Thus the question remaining open is: Which is the most plausible hypothesis, the one that interprets this something as an *unknown substance*, the one that interprets this something as the *very object of sensation*, or the one that interprets this something as the *direct action of the Divine Agency*? The second hypothesis being wholly excluded by the psychology of the schools (a mistaken psychology, I conceive), there only remains a choice between the first and the third.

'What is the *cause* of our ideas?' asks Professor Frazer. 'Impelled by the quasi-externality of our perceptions, we naturally regard them as determined from without; urged by the primary instinct of reality, we naturally regard them as determined from without by matter. The first hypothesis that was excogitated to explain our sensible perceptions therefore was the *Theory of Physical Influence or Afflux.* The material films of the atomists, the matterless forms of the schoolmen, the material properties and powers of modern materialists, were so many modifications of the same hypothesis.' To this succeeded the *Theory of Hyperphysical Influence* in the Cartesian school, especially in Malebranche and Leibnitz. Herein God replaced Matter. 'Our sensations were produced by His power, but our ideas were participations in His intelligence; and thus the knowledge of the world of matter was a *vision of the world in God.* It was in this position that philosophy was found by Berkeley, and it determined the evolution of his system. . . . He held with his predecessors that mind has an objective knowledge of a world of matter. He held with them that in this respect the mind is conscious of nothing but ideas. He held with them that these ideas must have a cause. He held with them that these ideas were not generated from within but were determined from without. With them he held that the external cause of our ideas could not be matter; and with them he held that the external cause was God. But if God were the cause of our ideas, why gratuitously suppose the existence of an unknown world of matter?'*

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* *The Theory of Vision Vindicated*, p. 40.

The whole dispute then resolves itself into the question of the cause. Our ideas, which are the objects, have a cause which is not ourselves—a Non-Ego. This cause, says Berkeley, cannot be material, because Matter is unknown; the cause must therefore be spiritual, because Mind is known. Existence comprehends but two kinds, entirely distinct, namely Spirits and Ideas: 'the former are active indivisible substances; the latter are inert, fleeting, and dependent beings which subsist not in themselves but are supported by or exist in, minds or spiritual substances'—a conception which may be thus restated: There are but two existences, namely permanent Organs, and transitory Acts; permanent Minds, and their fleeting States. Ideas are not less real because they are transitory; the vibration of a sonorous body is not unreal because it quickly subsides, to be reproduced, the same (though not numerically the same) whenever the body be again struck. Now the *appulse*, or idea, which is supposed by mankind in general, and by most philosophers to come from an *impulse* of Matter, is by Berkeley affirmed to be the impulse of God. God is the cause whereon ideas depend, by whom they are 'imprinted,' 'suggested,' 'excited.' *

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* *North British Review*, No. LXVIII. pp. 457-9.

To those who hold that God is known, and the only Existence that *is* known, Berkeley's position is assuredly a strong one. But those who demur to such a proposition, and who say that we have no evidence to warrant the assumption that God who made man did not *also* make a world in which man lives ; and who affirm that this world is the non-ego which *directly* excites the changes in the ego, however *indirectly* the excitation may come from God—those, and they are the vast majority, will say that since our irresistible belief affirms the existence of an external world, Philosophy has to decide which assumption is more consonant with our irresistible belief—the assumption of external existences independent of our sensations ; or the assumption of a providential scheme in which our sensations are the effects of the operation of Divine laws, and in which objective existences play no part. The answer cannot be dubious. The former assumption, as more consonant with universal belief, must be accepted.

Berkeley, we believe, failed as a metaphysical Copernicus, because the assumption which he opposed to the universal belief was less consonant with that belief than the assumption it was meant to replace. Had Copernicus not started an hypothesis which, however contradictory to the senses, nevertheless afforded a much better explanation of celestial phenomena than was possible on the old hypothesis, he would not have been listened to. Berkeley's assumption, if conceded, carries him no deeper than the old assumption. Idealism explains nothing. To accept it would be to renounce a universal belief for a mere hypothesis.

While Idealism may thus be answered on the general ground, Berkeley's Idealism may be shown to involve a special contradiction and a special difficulty. Its foundation is the proposition that objects are ideas, their *esse*, or total existence, being *percipi*. If things are only perceptions, the conclusion is obvious: whatever is not perceived does not exist. Now it is equally obvious that many things exist which are altogether beyond the reach of human perception; and if we deny the existence of whatever cannot be perceived, we must deny the motion of the earth, for instance. To escape such a dilemma Berkeley must enlarge his formula, and say, 'Objects are ideas; their *esse* is either *percipi* or *concipi*'—what cannot be directly perceived by the senses may be conceived by the reason. Let this be accepted; we may then ask, 'Why deny the existence of Matter, yet affirm the existence of the earth's motion? Both of these are conceptions, neither are perceptions. If we are forced to infer the existence of the earth's motion to explain the perceived phenomena, are we less stringently forced to infer the existence of an external substance to explain the objects of perception?'

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* Prof. Frazer, *loc. cit.*, corrects the very common mistake that Berkeley discarded Substance, in discarding Matter ; he simply replaced the material Substance by a spiritual Substance—*i.e.* the unknown by the known Cause.

Nor can he escape this dilemma by declaring that although the motion of the earth is not capable of being perceived by us, it would be perceptible were our faculties enlarged, and is perceptible to the higher minds; it may therefore be declared potentially perceptible. No doubt, if Motion exists, it is conceivably perceptible; but is not substance conceivably perceptible? Since the existence of both is admitted only on the grounds of inference, and not on the ground of perception, we are thrown back upon the previous question, Which inference has the greater probability, the existence of objects independent of ideas, or the existence only of ideas?

The whole question of Idealism is too vast to be argued here, even in outline; I have only to present it as it appears in Berkeley's scheme, adding by way of conclusion that those who have followed the course of this History with attention will not fail to observe how Berkeley's Idealism is at bottom the much-decried system of Spinoza, who taught that there was but one essence in the universe, and that one Substance.

Berkeley also taught that there was but one, and that one Thought. Now call this One what you will, the result is the same: speculatively or practically. There may be certain degrading associations attached to the idea of substance; or certain exalted associations attached to that of spirit. But what difference can our associations make with respect to the real nature of things?

One great result of Berkeley's labours was the lesson he taught of the vanity of ontological speculations. He paved the way to that Scepticism which is the terminal morass of all consistent Metaphysics.

FIFTH EPOCH.

The arguments of Idealism carried out into Scepticism.

CHAPTER I.

HUME.

§ I. Life of Hume.

MR. BURTON'S ample and excellent biography[*] would furnish materials for a pleasant memoir, could we here afford the requisite space; but we must content ourselves with referring the reader to that work, merely recording the principal dates and events of an uneventful life.

David Hume was born at Edinburgh, April 26, 1711; the youngest child of a poor laird of good blood. He became an orphan before his education was completed. His guardians first thought of the profession of law, but, owing to his repugnance, he was absolved from that career, and was placed in a Bristol counting-house, where he did not remain long. On coming of age, he found himself in possession of a small property, too small for honourable subsistence in England, but large enough for France; and he went to Rheims; from thence to La Flèche, where the Jesuits' college and library were great attractions to the studious youth; there he passed several years in solitary study.

A great ambition moved him: he was to accomplish for moral science a revolution analogous to that which Bacon had effected in physical science. His *Treatise on Human Nature,* which appeared in 1737, was announced as an attempt to introduce the Experimental Method into reasonings on moral science. It is needless to point out the profound misconception of the Experimental Method here implied; nor is it necessary to show at any length that there was no novelty whatever in Hume's attempt to test Psychology by experience.

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[*] John Hill Burton: *The Life and Correspondence of David Hume, from the Papers bequeathed to the Royal Society of Edinburgh,* 2 vols.

In 1741 appeared the first part of his immortal *Essays*; and in 1747 he accompanied General St. Clair, as secretary, in the embassy to Vienna and Turin. In 1752 he published his *Political Discourses* and the *Inquiry concerning the Principles of Morals.* The appointment of Librarian to the Faculty of Advocates in Edinburgh—the salary of which he generously gave to the poor poet Blacklock—placed at his disposal a fine collection of books; and this suggested the undertaking which has long been held his greatest title to fame—the *History of England,* the first volume of which appeared in 1754.

For the literary historian there are two piquant episodes in the life of Hume.. The first is the ovation given to the philosopher in Paris, whither he had accompanied the Marquis of Hertford; the second is his friendship and quarrel with Rousseau. Both are copiously narrated by Mr. Burton.

Hume died in the spring of 1776, leaving a name imperishable in our literature, although it is a name attached to opinions which have roused, and will continue to rouse, vehement opposition. In considering this it should never be forgotten that so wise and good a man as Adam Smith could publicly write of him, 'Upon the whole, I have always considered him, both during his lifetime and since his death, as approaching as nearly to the idea of a perfectly wise and virtuous man as perhaps the nature of human frailty will permit.'

§ II. Hume's Scepticism.

The marvellous acuteness and subtlety of Hume have never been denied. His influence upon speculation has been aided as much by the alarm his doctrines excited as by the ingenuity with which they were upheld. If Berkeley met with no refuters, Hume could meet with none. Antagonists have generally been compelled to admit that the sceptical reasoning was unanswerable.

Locke had shown that all our knowledge was dependent upon experience. Berkeley had argued that we have *no* experience of an external world independent of perception; nor could we have any such experience. He pronounced Matter to be an abstraction; which is true, but it is formed from concretes, of which we have experience. Hume took up the line where Berkeley had cast it, and flung it once more into the deep sea, endeavouring to fathom the mysteries of Being. Probing deeper in the direction Berkeley had taken, he found that not only was Matter an abstraction, Mind was an abstraction also. If the occult substratum, which men had inferred to explain material phenomena, could be denied, because not founded on experience ; so also, said Hume, must we deny the occult substratum (Mind) which men have inferred to explain mental phenomena. All that we have any experience of is impressions and ideas. The substance *of* which these are supposed to be impressions is occult—is a mere inference; the substance *in* which these impressions are supposed to be is equally occult—is a mere inference. Matter is but a collection of impressions. Mind is but a succession of impressions and ideas.*

Thus was Berkeley's dogmatic Idealism converted into Scepticism. Hume, speaking of Berkeley, says, 'Most of the writings of that very ingenious philosopher form the best lessons of scepticism which are to be found either among the ancient or modern philosophers, Bayle not excepted. He professes, however, in his title-page (and undoubtedly with great truth), to have composed his book against the Sceptics, as well as against the Atheists and Free-thinkers. But that all his arguments, though otherwise intended, are in reality merely sceptical appears from this, that they admit of no answer, and produce no conviction.'

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* Locke had already argued that we are as ignorant of spirit as of substance. We know mind only in its *manifestation*; we cannot know it as a *substratum*. Hume's argument, therefore, had a firm foundation in the current philosophy. He only concluded from admitted premises.

Remark also that Hume's scepticism, though it reduces Ontology to a singular dilemma,—namely, that of either refuting the sceptical arguments, or of declaring itself and its pretensions to be vain and baseless,—nevertheless affects in no other way the ordinary judgments or actions of mankind. Much stupid ridicule and frivolous objection have been, and probably will continue to be, brought against Hume. Reid, from whom one might have expected something better, is surprised at Hume's pretending to construct a science upon human nature, 'when the intention of the whole work is to show that there is neither human nature nor science in the world. It may perhaps be unreasonable to complain of this conduct in an author who neither believes his own existence nor that of his reader; and therefore could not mean to disappoint him, or laugh at his credulity. Yet I cannot imagine that the author of the *Treatise on Human Nature* is so sceptical as to plead this apology. He believed, against his principles, that he should be read, and that he should retain his personal identity, till he reaped the honour and reputation justly due to his metaphysical acumen.' He continues further in this strain, dragging in the old error about Pyrrho having inconsistently been roused to anger by his cook, 'who probably had not roasted his dinner to his mind,' and compares this forgetfulness to Hume's every 'now and then relapsing into the faith of the vulgar.' *

If this was meant for banter, it is very poor banter; if for argument, it is pitiable. But since such arguments appeared valid to a thinker of Reid's reputation, it is reasonable to suppose that inferior men may also receive them as conclusive. Hume shall therefore be allowed to speak for himself; and he shall speak in the language of that very *Treatise on Human Nature* to which Reid alludes:—

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* *Inquiry*, introd. § 5.

'Should it be here asked me whether I sincerely assent to this argument which I seem to take such pains to inculcate, and whether I be really one of those sceptics who hold that all is uncertain, and that our judgment is not in *any* thing possessed of *any* measures of truth and falsehood, I should reply that this question is entirely superfluous, and that neither I nor any other person was ever sincerely and constantly of that opinion. Nature, by an absolute and uncontrollable necessity, has determined us to judge as well as to breathe and feel; nor can we any more forbear viewing certain objects in a stronger and fuller light upon account of their customary connection with a present impression than we can hinder ourselves from thinking as long as we are awake, or seeing the surrounding bodies when we turn our eyes towards them in broad sunshine. Whoever has taken the pains to refute the cavils of this *total* scepticism has really disputed without an antagonist, and endeavoured by arguments to establish a faculty which *Nature has antecedently implanted in the mind, and rendered unavoidable.*

'My intention then in displaying so carefully the arguments of that fantastic sect is only to make the reader sensible of the truth of my hypothesis that all our reasonings concerning causes and effects are derived from nothing but custom; and that belief is more properly an act of the sensitive than of the cogitative part of our natures. . . . If belief were a simple act of the thought without any peculiar manner of conception, or the addition of force and vivacity, it must infallibly destroy itself, and in every case terminate in a total suspense of judgment. But as experience will sufficiently convince anyone that, although he finds no error in my arguments, yet he still continues to believe and think and reason as usual, he may safely conclude that his reasoning and belief is some sensation or peculiar manner of conception, which 't is impossible for mere ideas and reflections to destroy.' *

It is an illustration of the want of candour displayed by Hume's opponents that they never quoted this very significant and explicit passage; indeed I never remember to have seen the passage quoted by anyone. Let us ask, what does the foregoing declaration amount to, if not to the boasted 'common-sense view' that our belief in the existence of matter is instinctive, fundamental? Does not Dr. Brown's admission that the sceptical argument is unanswerable as a mere play of reasoning concede all that Hume requires? Does not Dr. Brown's conclusion that we are thrown upon 'irresistible belief' as our only refuge against scepticism equally accord with Hume's explicit declaration that we *do* believe, and cannot help believing, though we can give no reason for the belief?

'Thus the sceptic,' Hume adds a little further on, 'still continues to reason and believe, even though he asserts that he cannot defend his reason by reason; and by the same rule he must assent to the principle concerning the existence of body, though he cannot pretend by any arguments of philosophy to maintain its veracity. *Nature has not left this to his choice*, and has doubtless esteemed it an affair of too great importance to be trusted to our uncertain reasonings and speculations. We may well ask, *what causes induce us to believe in the existence of body?* but 't is in vain to ask *whether there be body or not?* that is a point which we must take for granted in all our reasonings.'

After this, let no more be said about Hume's practical inconsequences. Locke before him had clearly enough seen and signalised the impotence of the attempt to penetrate beyond phenomena, and had, with his usual calm wisdom, counselled men to 'sit down in quiet ignorance.' He knew the task was hopeless; he knew also that it was trivial. We have the means of knowing all that directly concerns us with a certainty which suffices for our wants. With that, reasonable men will be content. If they seek more, they seek the impossible; if they push their speculations deeper, they end in scepticism. It was the philosophical *mission* of Hume (to adopt a phrase in vogue) to show how inevitably all such speculations, if consistent, ended in scepticism.

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* *Human Nature*, part iv. § i. p. 250.

'Men,' he says, 'are carried by a natural instinct or prepossession to repose faith in their senses. When they follow this blind and powerful instinct of nature, they always suppose the *very images* presented to the senses *to be* the external objects, and *never entertain any suspicion that the one are nothing but representatives of the other.* But this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us that nothing can ever be present to the mind but *an image or perception.* So far then we are necessitated by *reasoning to contradict the primary instincts of Nature,* and to embrace a new system with regard to the evidence of our senses. But here philosophy finds herself extremely embarrassed, when she would obviate the cavils and objections of the sceptics. She can no longer plead the infallible and irresistible instinct of nature, for that led us to quite a different system, which is acknowledged fallible, and even erroneous; and to justify this pretended philosophical system by a chain of clear and convincing argument, or even any appearance of argument, exceeds the power of all human capacity.

'Do you follow the instinct and propensities of nature in assenting to the veracity of the senses? But these lead you to believe that the very *perception or sensible image is the external object*—(Idealism).

'Do you disclaim this principle in order to embrace a more rational opinion, that the perceptions are only *representations* of something external? You here depart from your natural propensities and more obvious sentiments; and yet are not able to satisfy your reason, which can never find any convincing argument from experience to prove that the perceptions are connected with external objects '—(Scepticism).

This is the dilemma to which Ontology is reduced: out of it there is no escape; and Hume deserves the gratitude of mankind for having brought Philosophy to this pass. Mankind, however, has paid him with reprobation. As the whole course of our History has been occupied in tracing the inevitable result of all Ontology to be precisely this, our readers will be prepared for a different appreciation of Hume. Let us therefore endeavour to define the nature of this scepticism, which has caused such great alarm. Scepticism, meaning doubt, and being frequently used to signify religious doubt, has alarming associations attached to it. To call a man a sceptic is to call him a heretic. And, unfortunately for Hume's philosophical reputation, he was a sceptic in Theology as well as in Philosophy, and mankind have consequently identified the former with the latter.

Now, philosophical scepticism means a doubt as to the validity of Philosophy;—in other words, a doubt only on one particular subject. If I accept the consequences to which the doctrine of Hume leads me, am I forced to suspend my judgment, and to pronounce *all* subjects uncertain? or am I only to pronounce *some* subjects uncertain? The latter is clearly the only opinion I can entertain. *What* then are the questions on which I must be content to remain in darkness? Locke, no less than Hume, has told us: All which relate to Ontology—which pretend to discuss the nature and essences of things considered as removed from all relation to us.

This scepticism, the reader must acknowledge, has nothing very alarming in it,—except to Philosophy. It is maintained by the vast majority of thinking men—some from conviction, others from a vague sense of the futility of ontological speculation. Only the bad passions roused in discussion could pretend to confound it with a religious heresy. Scepticism indicates the boundaries of inquiry. It leads us from impossible attempts to fly, and instructs us how securely we may run. It destroys Metaphysical Philosophy only to direct all our energies towards Positive Philosophy. In the words of Goethe, 'Let us not attempt to demonstrate what cannot be demonstrated! Otherwise we shall make our miserable deficiencies more glaring to posterity by our so-called works of knowledge.'

Hume was a sceptic; and, consequently, early in life ceased devoting his marvellous acuteness to any of the questions agitated in the schools. His *Essays* and his *History* were excellent products of this change of direction; and although he did devote a portion of the *Essays* to Philosophy, yet it was but a portion, and one which gave a more popular and elegant exposition of the principles of his first work.

§ III. Hume's Psychology.

It was clearly seen by Hume that the failure of Philosophy to compass its ambitious aim was owing to a false conception of the scope of human intellect. 'The only method,' he says, 'of freeing learning at once from these abstruse questions is to inquire seriously into the nature of human understanding, and show from an exact analysis of its powers and capacity that it is by no means fitted for such remote and abstruse subjects.'* The sceptical issue from his analysis could only be escaped by proving some flaw in the analysis.

All our mental furniture being reduced to Impressions (even ideas being simply the feeble copies of the livelier Impressions), the philosopher may 'banish all that jargon which has so long taken possession of metaphysical reasonings, and drawn such disgrace upon them. All ideas, especially abstract ones, are naturally faint and obscure. The mind has a slender hold of them: they are apt to be confounded with other resembling ideas; and when we have often employed any term, though without a distinct meaning, we are apt to imagine that it has a determinate idea annexed to it. On the contrary, all impressions, that is, all sensations, either outward or inward, are strong and sensible; the limits between them are more exactly determined; nor is it easy to fall into any error or mistake regarding them. When we entertain, therefore, any suspicion that a philosophical term is employed without any meaning or idea (as is but too frequent), we need but inquire, *from what impression is that idea derived?* And if it be impossible to assign any, this will serve to confirm our suspicion.'*

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* *Essays*, sect. i.

In other words, a conception which we are unable to reduce to sensible elements can have no objective reality. If it is a *relation*, we must exhibit the related *terms*. If it is a symbol, we must exhibit the facts which are converted into signs. Hume used the word Impressions in this wide sense: 'all our more lively perceptions when we hear, or see, or feel, or love, or hate, or desire, or will;' a somewhat unfortunate ambiguity, and one that was not cleared up by his distinction of Ideas as the same Impressions in a less vivid form. Nevertheless, although there was deficient precision in his views, he was, I think, on the track of true psychological discovery. That he had not clearly thought out the distinctions between faculties and sensations, or between sensations and ideas, is obvious enough. Thus in treating of the question of Innate Ideas, he says: 'If innate be equivalent to natural, then all the perceptions and ideas of the mind must be allowed to be innate or natural. . . . If by innate be meant contemporary to our birth the dispute seems to be frivolous; nor is it worth while to inquire at what time thinking begins, whether before, at, or after, our birth.' [What a complete misapprehension of the reach of the dispute!] 'Again, the word *idea* seems to be commonly taken in a very loose sense, even by Locke himself, as standing for any of our perceptions, our sensations, and passions, as well as thoughts. Now, in this sense, I should desire to know what can be meant by asserting that self-love, or resentment of injuries, or the passion between the sexes, is not innate? But admitting these terms, *impressions* and *ideas*, in the sense above explained, and understanding by *innate* what is original or copied from no precedent perception, then may we assert that all our impressions are innate, and our ideas are not innate.' In so acute a thinker, such confusion is remarkable.

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* *Essays*, sect. ii.

Hume perceived the difficulty of recognising Mind as an Entity; but his imperfect acquaintance with Biology prevented him from recognising the other alternative, that Mind might be a Function. In denying a mental *substratum* analogous to the *substratum* imagined to underlie the qualities of matter, he was left in a state of absolute scepticism. He gave a logical unity to consciousness, and supposed that this logical unity was all that men meant when they spoke of vital unity. A metaphysician might reasonably object that the reality of Mind was implied in the fact of impressions: an implied something which is impressed, a something which feels and ideates: that something being the mental substratum. A biologist would make a somewhat similar reply. Hume says, 'An impression first strikes upon the senses . . . of this impression there is a copy taken by the mind, which remains after the impression ceases; and this we call an idea.' This is preposterous and vague: it introduces an hypothetical Mind (whose existence he denies) acting like a copying machine; and when we come to learn what this Mind is, we find it is 'nothing but a *heap or collection* of different perceptions united together by certain relations, and supposed, though falsely, to be endowed with perfect simplicity and identity.'* What should we say to a philosopher who asserted that a locomotive was *nothing but a succession of spaces passed through*, and denied that there was any motor, any real object, passing through the described spaces?

If mind is a series of impressions, or, as modern psychologists say, a succession of states of Consciousness, what is their connecting link? Between any two states there must be an interval, however brief, in which no object occupies Consciousness. During this interval does Consciousness vanish, to reappear with the next state? Is there no continuity? The metaphysician answers: Yes. the Mind itself continues and connects in one synthesis all its manifestations. In the intervals between two acts, it is in the static condition; in the several manifestations, it is in the dynamic condition.

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* *Treatise on Human Nature.*

The biologist answers: Consciousness, being a vital process, not an Entity, has its synthesis in the continuity of the vital conditions. Just as a muscle continues to exist, as muscle, in the interval between two contractions, so does the nervous mechanism, of which Consciousness is a function, continue to exist in the interval between two acts of Consciousness; but neither Contractility nor Sensibility exist independently of their tissues; nor can they be manifested when the vital properties are exhausted.

The metaphysician would assuredly reject aid of *this* kind, even against Hume. He would assert that the reality of the mental entity is testified by Consciousness, and is proved by the fact that we say My body—an assurance that my body is not *me*. Here the biologist would remark that the testimony of Consciousness needs sifting by analysis. If we say, My body, not less undeniably do we say, My mind.

Hume's assertion that the mind is nothing but a series of impressions, was less the result of psychological investigation than of logical deduction. The arguments by which Berkeley had destroyed the notion of a substantive Matter were turned with equal force against the notion of a substantive Mind. But, nevertheless, this sceptical suggestion, once thrown out, could not fail to act like a ferment. It was a step towards the biological solution; a step which could not be carried far until Biology had from its side also approached the subject.

§ IV. Hume's Theory of Causation.

It is customary in speaking of Hume's theory of Causation, to bestow no inconsiderable acrimony upon him. But, in the first place, the theory is not peculiarly his; in the second place, his application of it to the question of Miracles, which has excited so much vehement controversy, reduces itself to 'this very plain and harmless proposition, that whatever is contradictory to a complete induction is incredible. That such a maxim as this should be either accounted a dangerous heresy or mistaken for a recondite truth, speaks ill for the state of philosophical speculation on such subjects.'*

The theory may be thus briefly stated. All our *experience* of causation is simply that of a constant succession. An antecedent followed by a sequent—one event followed by another: this is all that we experience. We attribute indeed to the antecedent a *power* of producing or causing the sequent; but we can have no experience of such a power. If we believe that the fire which has burned us will burn us again, we believe this from habit or custom; not from having perceived any *power* in the fire. We believe the future will resemble the past, because custom has taught us to rely upon such a resemblance. 'When we look about us towards external objects, and consider the operation of causes, we are never able in a single instance to discover any power or necessary connection—any quality which binds the effect to the cause, and renders the one an infallible consequence to the other. We only find that the one does actually in fact follow the other. The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the outward senses. The mind feels no sentiment or inward impression from this succession of objects; consequently there is not, in any single instance of cause and effect, anything which can suggest the idea of power or necessary connection.'* This is the whole of his theory. His explanation of our belief in power, or necessary connection, is that it is a matter of habit.

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* Mill: *System of Logic*, vol. ii. p. 183.

I know not whether Hume ever read Glanvill's *Scepsis Scientifica.* The title was one to attract him. At any rate, Glanvill had clearly enough stated Hume's theory, e.g. 'All knowledge of causes is deductive; for we know of none by simple intuition, but through the mediation of their effects. So that we cannot conclude anything to be the cause of another *but from its continually accompanying it*; for the *causality* itself is *insensible.*' Malebranche had also anticipated him; and so had Hobbes. The language, indeed, of the latter is so similar to the language employed by Hume, that I agree with Dugald Stewart in suspecting Hume to have borrowed it from Hobbes. 'What we call experience,' says Hobbes, 'is nothing else but remembrance of what antecedents have been followed by what consequents. . . . No man can have in his mind a conception of the future, for the future is not yet; but of our conceptions of the past we make a future, or rather call past future relatively. Thus, after a man has been accustomed to see like antecedents followed by like consequents, whensoever he seeth the like come to pass to anything he had seen before, he looks there shall follow it the same that followed then.'

This theory of Causation has been hotly debated, partly because of the 'consequences' which some have seen, with alarm, to be deducible from it (for opinions are judged of more by their supposed consequences than by their reasoned truth); partly also because Hume has not stated it with the clearness which prevents misunderstanding. It is only to the latter point we can here attend.

When Hume asserts that experience gives no intimation of any *connection* between two events, but only of their invariable *conjunction*—when he says that the mind cannot perceive a causal nexus, but only an invariableness of antecedence and sequence, he is, or seems to be, contradicted by the consciousness of his readers. They declare that, over and above the fact of sequence, there is always an intimation of *power* given in every causation, and this it is which distinguishes causal from casual sequence,—connection from mere conjunction. The fire burns paper because there is some power in the fire to effect this change. Mere antecedence, even if invariable, cannot be sufficient, or else day would be the cause of night, the flash of lightning would be the cause of the thunder-peal. In every case of causation there must be an element of power—a capacity of producing the observed change—a nexus of some kind, over and above the mere juxtaposition of bodies. If diamond will cut glass, it has a power to do so; the sharpest knife is without this power.

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* *Essays*, sect. vii.

So reason Hume's antagonists. Nor do I think they are finally answered by resolving the idea of power into mere invariableness of antecedent and sequent; for they may reply that the 'invariableness' itself, which can never be a matter of direct experience, is deduced from the idea of power: we believe the fire will invariably burn the paper because it has the power to do so, because there is a real nexus between fire and the combustion of paper; only on such a belief can our expectation of the future resembling the past be securely founded.

The ordinary belief of mankind in the existence of something more than mere antecedence and consequence is therefore a fact. This fact Hume and others admit. Because they cannot perceive the power, they declare that we have no right to believe in it. Hume insists upon the impossibility of our perceiving power—of our perceiving any necessary connection between two events. But, say those who oppose this theory, 'Although we cannot *perceive* the power, we are forced to *believe* in it; and this belief is not a matter of custom, but is given in the very facts of consciousness. We perceive that *some power* is at work producing effects; the *precise nature* of this power, indeed, we cannot perceive, because we never can know things *per se*. When a spark ignites gunpowder, we perceive a power in the spark to ignite gunpowder: *what* that power is, we know not: we only know its effects. But our ignorance is equally great of the gunpowder: *what* it is, we know not; we only know its appearances to us. It might as well be said that we believe in the gunpowder from custom (since we really know nothing of it *per se*) as that we believe in the power of the spark to ignite gunpowder from custom, since we really know nothing of powder *per se*. We know nothing *per se*.'

I have marshalled the arguments, with as much force as I could muster, into so small a field, in order to bring into appreciable distinctness the source of the opposition to Hume's theory on the part of many who have no doctrinal distrust towards it. Before attempting an elucidation of the difficulty, it will be needful to consider the grounds of our belief in causation. As it is a fact that all men believe in some power involved in every causal act, we have to ask, Is that belief well founded?

Two schools at once present themselves. The one (that of Hume) declares that the belief has no good grounds; it is a matter of custom. If I believe the sun will rise to-morrow, it is because it has always risen. If I believe that fire will burn in future, it is because it has always burned. From habit I expect the future will resemble the past: I have no proof of it.

The other school declares that this belief in causation 'is an intuitive conviction that the future will resemble the past.' This is the language of Reid and Stewart. Dr. Whewell would have us admit the belief as a fundamental idea—a necessary truth independent of and superior to all experience.

Both explanations are questionable. Custom or habit can essentially have nothing whatever to do with it, because our belief is as strong from a single instance as from a thousand. 'When many uniform instances appear,' says Hume, 'and the same object is always followed by the same event, *we then* *begin to entertain* the notion of cause and connection. We then feel a new sentiment, to wit, *a customary connection* in the thought between one object and its usual attendant; and this sentiment is the original of that idea which we seek for.' This is manifestly wrong. A single instance of one billiard-ball moving another suffices to originate the 'sentiment,' without further repetition. Nor is there more truth in the assertion that the belief depends on 'conviction of the future resembling the past;' this explanation assumes that the general idea precedes the particular idea. When we believe that similar effects will follow whenever the same causes are in operation—when we believe that fire will burn, or that the sun will rise to-morrow—the belief is simply *following our experience*, and nothing more. We cannot help believing in our experience: that is irresistible; but in this belief, the idea of either past or future does not enter. I do not believe that fire will burn because I believe that the future will resemble the past; but simply because my experience of fire is that it burns—that it has the power to burn. Take a simple illustration, trivial, if you will, but illustrative:—A child is presented with a bit of sugar: the sugar is white, of a certain shape, and is solid; his experience of the sugar is confined to these properties: he puts it in his mouth; it is sweet, pleasant: his experience is extended; the sugar he now believes (knows) to be sweet and pleasant, as well as white and solid.* Thus far experience is not transcended. Some days later, another piece of sugar is given him. Is it now necessary for him to have any 'intuitive conviction that the future will resemble the past'—any fundamental idea independent of experience—to make him believe that if he puts the sugar in his mouth it will taste sweet? Not in the least:

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* It will perhaps seem strange that we should select sweetness as an example of causation. We selected it for its simplicity. No one will deny that the taste of sweetness is as much an effect caused by the sugar as pain is an effect caused by fire. But people are apt to overlook that causation is the properties of one body acting upon the properties of another. They would call sweetness a quality in sugar; but the motion of a billiard-ball they say is *caused* by another ball.

he believes it is sweet because his experience of sugar is that it *is* sweet. By no effort could he divest himself of the idea of its sweetness, because sweetness forms an integral part of his idea of the sugar. So we may say of the sun's rising: it is part and parcel of our idea of the sun. So of one billiard-ball putting a second in motion: our experience of billiard-balls is that they put each other in motion.

Custom has primarily nothing to do with the belief. If we had only one experience of fire—if we saw it only once applied to a combustible substance—we should believe that it would burn, because part of our idea of fire would be that of a thing which burns. Custom has however, secondarily, some influence in correcting the tendency to attribute properties to things. Thus, a child sees a friend who gives him an apple. The next time the friend comes he is asked for an apple, because with the image of this friend is combined the image of a man who, amongst other properties, has that of giving apples. No apple is given, and this idea is disturbed. Similarly, when all our experience of things is confirmatory of our *first* experience, we may say that habit or custom induces us to attribute certain effects to certain causes. When our subsequent experience contradicts our first experience, we cease to attribute those effects to those causes which we first experienced; this is only saying that our subsequent experience has destroyed or altered the idea we formed at first.

Remark how much confusion is spread over this subject by the inconsiderate introduction of the word belief. It is misleading to say that a man *believes* that fire will burn him if he puts his finger in it; he *knows* it. He will believe that it has burned some one else—he will believe in a *proposition* you make about fire, belief being the assent to propositions: but to talk of his believing that sugar will be sweet when he cannot think of it otherwise than as sweet; or that fire will burn when he knows it burns, is as misleading as to say that he *believes* himself cold when he feels cold.

Only from this misleading use of the word belief could the theory of fundamental ideas, or of 'an intuitive conviction that the future will resemble the past,' have stood its ground for a moment. If the proposition 'Fire will burn paper' were put to anyone, he would unquestionably believe it, because his knowledge of the fire is of its burning properties. The proposition is as evident to him as that two and two make four. Although, therefore, he may be said to believe in the proposition 'Fire will burn paper,' he cannot properly be said to act upon belief when he attempts to light paper: he acts upon his knowledge. Metaphysicians argue as if the belief in the immediate result of an action were a belief in some *implied proposition* about the course of nature. It is really a reliance upon experience; nothing more.

We must distinguish between belief in existence and belief in propositions. It is inaccurate to say that a man *believes* in his own existence, as if that were a belief in a proposition. But though a man cannot believe in his own existence, simply because it is impossible for him to conceive himself as non-existent, he may believe that he will exist eternally, because that is a proposition, the converse of which is conceivable and maintainable.

The primordial act of all thinking whatever, is, as I have explained in the Prolegomena to this History, the making *present* to the mind of what is *absent* from the sense; and this, which connects all intellectual phenomena into one class, renders the accurate demarcation of them sometimes impossible, so insensibly does the one pass into the other. Thus when I say, 'I see it has rained,' because the wet streets make me infer that the wetness was caused by rain, my assertion is grounded on a mental re-presentation of the absent occurrence, precisely analogous to that which takes place when I *infer* the sweetness of the sugar before me, or *perceive* that the flower in my sister's hair is a rose, or *believe* that the paper she holds close to the candle will infallibly ignite if paper and flame come in contact. In each case the inference, perception, or belief, is the re-presentation of facts formerly present in my experience of rain, sugar, roses, and candles. Whenever I forget any of the attendant facts, i.e. fail to make them present, I can only form an incomplete conception of the thing about which I reason, or infer. Bad logic is imperfect re-presentation. In proportion to the complexity of a proposition will be the liability to error, because of the liability to suffer some of the attendant facts to drop out of sight. Thus the proposition 'Fire will burn paper' is so simple, and accordant with daily experience, that assent to it is instantaneous; but the proposition 'Human life may extend over two centuries' is one implying so many facts which cannot be made present to the mind, because not lying within familiar experience, that instead of assent it produces denial, or at least doubt, which is suspension of belief, which again is the confessed inability to make all the facts present to the mind. That 'two and two make four' is the immediate and irresistible conclusion of the educated man; nevertheless, this very man would pause before assenting to the proposition 'Eight times three hundred and ninety-six, make three thousand one hundred and sixty-eight,' because he would have to make present to his mind the successive steps of the calculation, and this would demand an effort, great in proportion to his want of familiarity with calculations.

In spite of this identity of belief and perception, it is necessary for the perspicuity of discussion to discriminate the two, and I propose therefore to restrict the term belief to the assent to propositions, and demarcate it from those direct inferences which are made in the presence of objects and have reference to them. I would say, we believe in the proposition 'Fire burns,' but know that the paper about to be thrust into flame will ignite. Such a discrimination of terms will be found useful in discussing causation. We shall thus see in what respect assent to a proposition, complex in its elements, differs from the 'practical belief' of mankind in particular facts—we shall separate the belief of the philosopher in the proposition 'Every effect must have a cause,' from the belief of the child that the fire, which yesterday burned paper, will burn it to-day. Both beliefs are grounded on and limited by experience; but the experience of the philosopher is distinguished from that of the child by its greater accumulation of analogous facts. The 'necessity' and 'universality' which, according to Kant, distinguish the philosophical concept, and raise it above experience, will be considered hereafter. For the present it is enough if we have reduced belief in causation (or in power) to experience of a direct kind, *not* separable from any other intellectual act, but allied to all other acts in being the mental re-presentation of phenomena formerly present in experience. And this will help us, perhaps, to reconcile the combatants who quarrel over the idea of 'power' in causation.

Thus while it will be admitted by the one party that between two events, named respectively cause and effect, no *nexus* is perceived by us, over and above the mere fact of antecedence and sequence; and that therefore Hume is right in saying—'we only perceive this antecedence, and do not perceive the causal link;' on the other hand it must be maintained, that between those two events there is a specific *relation*, a something which makes the one succeed the other, causing this particular effect rather than another; and this subtle link it is which is the nexus contended for; this relation it is which distinguishes a causal act from one of accidental sequence. There must be a peculiar relation existing between oxygen and metals, otherwise metals never could be oxidised. The oxidation of iron is an effect like the ignition of paper; but it is an effect producible only through a specific relation or cause. If cause is a Relation, the reason of our inability to perceive it as an isolated existence, is the inability to isolate a relation from its related terms. It is not an object that can be presented to consciousness. Our phenomenal knowledge must ever be limited to the mere recognition of related terms. But although the relation is not an object of perception, it is an object of induction, and if it exist we may discover it.

All things necessarily stand related to all other things:

sometimes these relations are obtruded on our notice, because they pass from relations of coexistence into relations of succession, and we name them causes and effects; at other times they remain in the background of unremarked coexistence, and our unsolicited attention overlooks them; we do not then name them cause and effect. The carbonate of lime, which I see before me as marble, suggests to me, in its inaction, no conception of power, or causation, because my attention is not solicited by any *successive* relations; yet, if I had witnessed the action of the carbonic acid on the lime, and perceived the motions which originally *caused* the two substances to unite and form marble, the passage from one state to another would have suggested the idea of some power at work. It is clear that there must be relations existing between the carbonic acid and the lime, which *cause* the two to remain united, as we see them in marble. We do not see these relations—we do not therefore see the cause—but we know the cause must be in operation all the while, although, in consequence of no changes taking place, we are not solicited to observe the operation. Hence it is that only successive phenomena are named causal; and hence is it that Hume was right in saying that, in a last analysis, invariableness of antecedence and sequence is all that experience tells us of causation; although he did not, I think, state this position clearly, nor discern its real

This conception of Causation, as the direct Relation between any two phenomena, whether coexistent or successive, accords with the conception that what is called the effect is itself but the union of concurrent causes—the oxygen and the metal co-operate to form an oxide; the group of facts which we designate as the antecedent, combines with the group of facts called the sequent; as when we say that 'Henry I. died of eating lampreys;' by which we mean, that in a certain condition of his organism the introduction of lampreys was the antecedent to a whole series of sequences terminating in death; although we are perfectly aware that the lamprey was not the 'cause,' but only one integer in the sum of causes. The difficulty in fixing upon a true cause is this very complexity of relations: only when we can be said to know all the elements of a group, can we isolate one to estimate its influence.

I have endeavoured to reconcile the two contending parties on this perplexing question, and for all further discussion must refer to Mr. Mill's chapter in his *System of Logic*, where however there is a passage which seems to me quite contrary to the doctrine he upholds. I allude to his strictures on the dogma *cessante causâ cessat et effectus.* 'A *coup de soleil* gives a man a brain-fever: will the fever go off as soon as he is moved out of the sunshine? A sword is run through his body: must the sword remain in his body in order that he may continue dead?'* Surely this argument is tenable only by those who identify a cause with the whole group of conditions which precede, and the effect with the whole group of conditions which succeed; and is not tenable by those who hold cause and effect to be simply antecedent and sequent. The solar rays striking on the man's head produce a disturbance in the circulation, which in its turn becomes the antecedent to a congestion of the blood-vessels in the brain, which becomes a brain-fever; instead of one succession of cause and effect, we have here a series of such successions; and if we could analyse the various stages of the sunstroke, we should find that each effect did cease on the cessation of the cause; indeed, if an effect be nothing but the sequent of an antecedent—and not the product of some creative power in the cause—it must depend for its existence on the presence of the antecedent.

Hume's Theory of Causation set Kant speculating on the constituent elements of cognition; but before we follow out the development of Philosophy in that direction, it will be necessary to trace the further development of Locke's influence in other directions.

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* Vol. i. p. 413, first ed.

SIXTH EPOCH.

Attempts to discover the mechanism of psychological action: the Sensational School.

CHAPTER I.

CONDILLAC.

§ I. LIFE OF CONDILLAC.

ETIENNE BONNOT, who became Abbé de Condillac, was born at Grenoble, in 1715. His life was passed mainly in study, and was not varied by any of those incidents which give interest and romance to biography. He published his first work, *Essai sur l'Origine des Connoissances humaines*, in 1746; three years after, his *Traité des Systèmes.* His other works followed rapidly; and established for him such a reputation that he was appointed tutor to the Prince of Parma, for whose instruction he wrote the *Cours d'Études.* In 1768 the capricious doors of the Académie Française were opened to him; but once elected a member, he never after attended any of its sittings. He published his *Logique* in 1780, a few months before his death; and he left behind him his *Langue des Calculs*, published in 1798.

There is one biographical detail of interest, though I do not remember to have seen it alluded to by anyone except Mr. Maurice,* and it receives fresh interest from the point of resemblance it suggests in the lives of two other philosophers.

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* MAURICE: *Modern Philosophy.*

The influence of a woman's mind in determining the later speculations of Auguste Comte, and those of another eminent thinker, still living, is avowed by them; a similar influence is avowed with equal candour and almost equal enthusiasm by Condillac in the case of Madlle. Ferrand, to whom 'he owed the illumination which dispelled his prejudices.' He regrets her loss, and the imperfect state of his work thus deprived of her revision. The merit, if there be merit, he ascribes to her. 'Les vues les plus fines qu'il renferme sont dues à la justesse de son esprit et à la vivacité de son imagination. Elle sentit la nécessité de considérer séparément nos sens, de distinguer avec précision les idées que nous devons à chacun d'eux, et d'observer avec quel progrès ils s'instruisent, et comment ils se prêtent des secours mutuels.' *

§ II. CONDILLAC'S SYSTEM.

We have seen how Idealism and Scepticism grew out of the doctrines respecting the origin of knowledge. We have now to see the growth of the Sensational School.

The success which Locke met with in France is well known. For a whole century the countrymen of Descartes extolled the English philosopher, little suspecting how that philosopher would have disclaimed their homage, could he have witnessed it. Condillac is the acknowledged representative of Locke in France. When his first work, entitled *Essai sur l'Origine des Connoissances humaines*, appeared he had no notion of simplifying Locke by reducing all Knowledge to Sensation. He was a modest disciple, and laid down as the fundamental principle that 'sensations and the operations of the mind are the materials of all our knowledge—materials which reflection sets in action by seeking their combinations and relations.' (Chap. i. § 5.)

In 1754 appeared his celebrated work, the *Traité des Sensations*. In it he quits Locke for Gassendi and Hobbes. 'The chief object of this work,' he says, 'is to show how all our knowledge *and all our faculties* are derived from the senses, or, to speak more accurately, from sensations.' The inclusion of 'our faculties,' as well as our ideas, in this sensuous origin is however due entirely to Condillac. Hobbes never thought of such a simplification. The divergence from Locke is obvious: instead of the two sources of ideas, recognised in the *Essay on Human Understanding*, it assumes one source only—Sensation; instead of Mind, with certain elementary faculties, it assumes one elementary faculty—that of Sensibility—out of which all the faculties are evolved by the action of external objects on the senses. Nor was this a mere phrase of Condillac: the principle is radical; it constitutes the peculiarity of his system. Speaking of various philosophers, and quoting, with praise, the maxim attributed to Aristotle, that 'Nothing is in the intellect which was not previously in the Senses,' he adds, 'Immediately after Aristotle comes Locke; for the other philosophers who have written on this subject are not worthy of mention. The Englishman has certainly thrown great light on the subject, but he has left some obscurity. . . . All the faculties of the soul appeared to him to be innate qualities, and he never suspected they might be derived from sensation itself.

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* *Traité des Sensations*, pp. 48–55.

'Locke is the first,' he says, 'who remarked that the inquietude caused by the privation of an object is the principle of our actions. But he makes the inquietude born of desire, and it is precisely the contrary. . . . It remained therefore to show that this inquietude is the first principle given to us by the habits of touching, seeing, hearing, tasting, comparing, judging, reflecting, desiring, loving, hating, fearing, hoping, willing; that, in a word, it is from this arise all the habits of the soul and body.

'Locke distinguishes two sources of ideas, sense and reflection. It would be more exact to recognise but one; first, because reflection is in its principle nothing but sensation itself; secondly, because it is less a source of ideas than a canal through which they flow from sense.

'This inexactitude, slight as it may seem, has thrown much obscurity over his system. He contents himself with recognising that the soul perceives, thinks, doubts, believes, reasons, wills, reflects; that we are convinced of the existence of these operations, because we find them in ourselves, and they contribute to the progress of our knowledge; but he did not perceive the necessity of discovering their origin, and the principle of their generation,—he did not suspect that they might only be acquired habits; he seems to have regarded them as innate, and he says only that they may be perfected by exercise.'[*]

This is far enough from Locke, who would have been amazed to hear that 'judgment, reflection, the passions—in a word, all the faculties of the mind—are nothing but *sensation which transforms itself differently* (qui se transforme différemment).'

Those who are curious to see how sensation transforms itself into these faculties may read Condillac's account. 'If a multitude of sensations operate at the same time with the same degree of vivacity, or nearly so, man is then only an animal that feels; experience suffices to convince us that then the multitude of impressions takes away all activity from the mind. But let only one sensation subsist, or without entirely dismissing the others, let us only diminish their force; the mind is at once occupied more particularly with the sensation which preserves its vivacity, *and that sensation becomes attention*, without its being necessary for us to suppose *anything else in the mind.* If a new sensation acquire greater vivacity than the former, it will become in its turn attention. But the greater the force which the former had, the deeper the impression made on us, and the longer it is preserved. Experience proves this. Our capacity of sensation is therefore divided into the sensation we have had and the sensation which we now have; we perceive them both at once, but we perceive them differently: the one seems as past, the other as present. The name of *sensation* designates the impression actually made upon our senses; and it takes that of *memory* when it presents itself to us as a sensation which has formerly been felt. Memory is only the transformed sensation. When there is double attention there is comparison ; for to be attentive to two ideas, and to compare them, is the same thing. But we cannot compare them without perceiving some difference or some resemblance between them: to perceive such relations is *to judge.* The acts of comparing and judging are therefore only attention ; it is thus that sensation becomes successively attention, comparison, judgment.'

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[*] *Extrait raisonné du Traité des Sensations: Œuvres de Condillac* (1803), iv. 13. Compare: *Essai sur l'Origine des Connoissances*, p. 26; and *Logique*, pp. 25, 49, 83.

If ever the epigram of Leibnitz, *nisi ipse intellectus*, could be used as an argument, it would be against this system. Although Condillac's plausibility captivated Europe for a time, there was a speedy reaction, springing from the conviction that, however Condillac might identify the phenomena, a real distinction existed in fact. He was quite consistent. He considered that judging, comparing, numbering, imagining, wondering, having abstract ideas, having ideas of time and number, knowing general and particular truths, are only different ways of attending; all our passions are different ways of desiring; and as attention and desire are modes of feeling, it is clear that sensation 'enveloppe toutes les facultés de l'âme.'

Now the first objection which must be raised against this system, though it is one which I do not remember to have seen raised, is that it presupposes the existence of the very Mind which it proceeds to deny. Condillac is called a materialist, because careless readers or uncandid antagonists have overlooked his plain and repeated statements of his belief that there is a soul in the body, and that the sensations are only the occasional causes of mental operations.*

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* 'Je dis la *cause occasionnelle*, parce que les sensations sont les modifications propres de l'âme, et que les organes n'en peuvent être que l'occasion.'—*Traité des Sensations*, p. 51.

Hence he recognises the power of the mind to acquire ideas even independently of sense; which will be the case in a future life. Nor is this hypothesis of *l'âme*, as an existing entity, a mere make-believe phrase. The activity of the soul, in sensation itself, is always presupposed by him. Thus, in his famous statue, each sensation calls forth judgment, comparison, desire; and yet Condillac pretends that these faculties thus called forth are only the sensation itself transformed; but, however he may name the process, the process itself in no respect differs from that described by Locke, who also taught that the mind exercised its faculties on materials furnished by sense.

Thus, while he pretends to evolve all knowledge and all the faculties out of sensation and the transformations of sensation (which is to be his advance on Locke), we cannot but observe that in his evolution the presence is tacitly admitted of those very faculties which are said to be evolved. In fact, he confounds the faculties with the operations of the faculties. Nor was there any alternative for him. In the absence of the faculties which elaborate sensations into perceptions, judgments, reasonings, the senses would never have raised his statue above the condition of idiocy. A man reduced to mere sensations would be like the pigeon whose cerebrum is removed, sensitive indeed, but incapable of memory, judgment, thought. Condillac was therefore forced to presuppose the existence of the mental faculties—the transforming power. To say that sensations themselves were the faculties, was equivalent to saying that exercise is the faculty of running. The child cannot run until he has learnt to use his limbs, but the exercise, in which this is learned, does not give him the limbs. Condillac was perfectly right in saying that we are not born with our mental faculties ready developed, any more than we are born capable of running at once; and when he divined this truth he was on the threshold of an important investigation, namely, How are the faculties developed? but he was unable to pursue the investigation, not having a right Method. Instead of biological, he pursued verbal analysis. A verbal analysis of the phenomena was approximately made, and this was accepted as a substitute for the analysis of organ and function.

The second objection is, that if the mind is a *tabula rasa* as to knowledge, and is not even pre-existent as faculty (according to the metaphysicians) or as organism (according to the biologists), if, in a word, sensations and combinations of sensations create both knowledge and the knowing faculties, how can we explain the phenomena of idiocy? How is it that brutes with senses resembling our own have minds so markedly distinguished from our own? The sensations of the idiot are as vivid and varied as those of a rational man; the differences arise in the *cerebrations* of the two. Condillac felt the force of the objection respecting brutes, and attempted to elude it, first by asserting that brutes had less perfect sensations of touch, 'et par conséquent il ne sauroit être pour elles la cause occasionnelle de toutes les opérations qui se remarquent en nous;' and secondly, by assuming that the 'soul of brutes was of an essentially different order from that of man.'* To the first we reply, that idiots and apes have the perfect sense of touch, without the perfection of mind assumed as following from it; to the second, that it is a mere evasion of the difficulty.

Finally, if Sensation is the origin and end of all mental faculty, how is it that men of vivid sensuous activity are not also the men of powerful intellect, which they notoriously are not; how can such a case as that of Laura Bridgman be explained?—a girl born deaf, dumb, and blind, yet manifesting unusual and varied intellectual activity. The biologist sees no difficulty here; nor does the ordinary psychologist. The one sees a cerebral organism, with its inherited aptitudes, ready for its work; the other sees a Mind, with its constituent faculties. But the sensationalist has no such refuge. Unless, indeed, he belongs to that biological school which traces the development of Sensibility throughout the animal series, and notes the derivation of the faculties from organic developments, so that what was simple sensation at first, gradually becomes identified with the form of Sensibility peculiar to cerebration. It was no such idea as this, however, which guided Condillac. He saw that sensation was the origin of all mental phenomena; and not seeing how the faculties could be identical with sensation, he really presupposed their existence while proclaiming them to be only transformations.

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* Loc. cit.

I said that verbal analysis was accepted in lieu of a biological analysis. This points to a peculiarity in Condillac's system. It was his merit to have seen, and clearly exhibited, the immense influence exercised by language over thought. It was his mistake to have exaggerated that influence, and to have drawn the conclusion that a perfect science is only a perfect language.* There can be no doubt that when a science is perfect its language will be perfect also; but Condillac reverses this, and says that we see science forming itself as its language is formed; and in simplifying language we render the science more facile. Here he forgets his own remark, 'Parce que nous donnons des noms à des choses dont nous avons une idée, on suppose que nous avons une idée de toutes celles auxquelles nous donnons des noms.' †

Words are the signs of ideas, and language is a means by which reasoning is carried on, not the reasoning itself. Condillac affirms that without names we should have no abstract ideas; but the reverse is true: without the power of abstraction we should never need the names which are only signs of the abstracts. 'Si nous ne raisonnons,' he says, 'qu'avec le secours de ces dénominations, c'est une nouvelle preuve que nous ne raisonnons bien ou mal que parce que notre langue est bien ou mal faite.' So completely did he invert the real process that he declared the art of reasoning was reduced to a well-constructed language, 'because the order in our ideas is itself only the subordination existing in the names given to genera and species.'

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* 'Une science bien traitée n'est qu'une langue bien faite.'—*Langue des Calculs*, p. 7. Comp. pp. 142, 163.

† *Logique*, p. 50.

Starting on the false supposition that a verbal analysis could lead to anything more than verbal analysis, it seemed to him that metaphysics was capable of the same precision as geometry, if only the expressions were as accurately determined;* and his analysis of the mind is a remarkable illustration of the facility with which a man may seem to say a good deal merely by naming things in a new way. Let anyone examine Condillac's genesis of the faculties, and he will find that it is solely a process of naming.

I will begin at the beginning, and show that under the one name of Sensation he includes two really different things, that is to say, two phenomena having different characters, and although allied by a community which unites all the phenomena of Sensibility, nevertheless as rigidly to be demarcated, in virtue of their specific differences, as any other two phenomena. Sensation and Ideation are two distinct functions. They have two distinct organs. To speak of Cerebration or Ideation as the same phenomenon exhibited by the organs of Sense—to call an idea a 'transformed sensation'—is equivalent to calling a muscular motion a transformed sensation. In the one case, as in the other, a sensation is the starting-point; in the one case, as in the other, the starting-point is not the sequence. A sensation stimulates a muscle into action; a sensation stimulates the Cerebrum into action. The Neurility of an ingoing nerve is transformed into (awakens) Sensibility in the Centre, and is retransformed into (awakens) Neurility in the outgoing nerve, which again is transformed into (awakens) Contractility in the muscle. This is the sequence, as I have elsewhere endeavoured to prove; and the sequence is alike whether the final phenomenon be a thought or an action; the only difference being that in the one case the Sensibility of a Centre is reflected on the Cerebrum, in the other it is reflected on a muscle.†

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* *Essai sur l'Origine des Connoissances*, p. 2.

† *Physiology of Common Life*, ii.

By Sensation therefore must be understood that form of Sensibility which belongs to the organs of Sense—including, of course, those important, but generally neglected, sensibilities which arise from the viscera and from muscular actions. The Centres of these are the various sensory ganglia at the base of the cerebrum and in the medulla oblongata, with the ganglia imbedded in the spinal cord.

Is Ideation the same thing? It also is a form of Sensibility*—the peculiar property of ganglionic tissue—but it is a *special* form, the action of a special organ. It cannot be separated from sensation, any more than movement can be separated from sensation; but that it is the action of a special organ, and subject to special laws, suffices to demarcate it from the activity of the senses.

The point in dispute is so important, and is so intimately bound up with the whole doctrine of the Sensational School, forming indeed the battle-ground of all psychological doctrine, that we must consider it with more than a passing attention. The confusion of Sensation with Ideation, is Condillac's systematic error; but it is an error from which few, if any writers, even of the spiritualist schools, have been free. Explicitly, or implicitly, these two phenomena have been regarded as two aspects of the same thing. The rigorous demarcation of Sensation as one process, from Cerebration as another process—each dependent on its separate nervous centre—will be found in no psychological treatise. Nevertheless Comparative Anatomy has succeeded in demonstrating the independence of the organs of Sense and the Brain; although no one has yet succeeded in detecting the true relations which connect these independent centres, and make them act together. We know that the Brain is as much an *addition* to the organs of Sense as these organs are additions to the nervous system of the simpler animals. Low down in the animal scale we can detect no trace at all of a nervous system; ascending a few steps, we detect a simple ganglion with its prolongations; ascending higher, we detect a more complex arrangement of ganglia, and rudimentary organs of Sense; ascending still higher and higher, we detect more complex organs of Sense, and a rudimentary Brain; till at last we arrive at man, with his complex organs and his complex Brain. But so independent is the Brain, that even in the human species cases occur of 'anencephalous monsters,' that is to say, children born without any Brain whatever; and these children breathe, suck, cry, and struggle, like other children.

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* 'Les idées sont, comme les sensations, des manières d'être de l'âme.' CONDILLAC: *Logique*, p. 83. True enough; but not the same *manières d'être*. Motion and secretion are modes of vital activity, but no one supposes them to be the same.

Granting this, we grant that the functions, Sensation and Ideation, are as independent as the organs of which they are the functions; and although Ideation is organically connected with Sensation, yet it is not more so than Muscular Motion is connected with Sensation.

It is customary to speak of the organs of Sense as if they were simple organs: we must not innovate in this matter, although we find it needful to remind the reader that each special sense is really the function of a complex apparatus of organs. The apparatus of Sight, for example, may be separated into at least three parts;—1st, for the reception of impressions of light; 2nd, for the transmission of those impressions (i.e. the nerve with its Neurility); 3rd, for the sensation (i.e. the ganglion with its Sensibility). Of these the last only need here be especially considered, and may be called the *Sensational Centre.* In this centre the external stimulus becomes a sensation; from this centre the sensation is generally (not always) propagated to the Cerebrum, which in turn may propagate the influence to the muscles or glands.

Every sense, whether it be one of the five special senses, or of the so-called 'organic senses' (such as those of the alimentary canal and of muscular activity), has its own special centre, or *sensorium*: but there seems to be no ground for assuming, with Unzer and Prochaska, the existence of any one general *sensorium*, to which these all converge; and I shall speak therefore of the *Sensational Centres* as the seats of sensations derived from the stimuli which act on the organs of sense. Considered as Sensational Centres, they are perfectly independent of the Brain; they may and do act without implicating the Brain, for they will act when the Brain is absent; an animal deprived of its cerebrum manifests unequivocal symptoms of being sensitive to light, sound, &c. But in the normal state of the organism these centres are intimately connected with the Brain; and the stimuli which affect them directly, indirectly affect the Brain. Light, impinging on the retina, determines a change in the optic Sensational Centre; this change is usually propagated to the Cerebrum; and as the first change was a sensation, so is the second an idea; this idea may excite other ideas, or it may be so faint in its influence as to be almost immediately absorbed, and then we are said to be 'scarcely conscious' of the sensation—meaning that we thought very little about it: an example of which is the little attention we pay to the clock striking when we are engaged in study, if the fact is indifferent to us; we hear it, but do not think of it the next moment; if on the other hand the striking of the clock is not indifferent to us, the various thoughts which it awakens make us eminently 'conscious of the sensation.' In the heat of battle, a sword passes through a man's arm, and nevertheless the wound is followed by no pain or 'consciousness;' the stimulus which under ordinary circumstances would have been propagated from a Sensational Centre, and thence radiating to the Cerebrum, would have roused up manifold ideas, namely, of consequences, what was necessary to be done, &c., is prevented from so radiating, and is not carried beyond the Sensational Centre.

Not only can we have sensations without being conscious of them—i.e. without thinking about them; we can also think with perfect freedom when all the Sensational Centres (except those of organic life) are unaffected by any external stimulus, i.e. when we have no special sensations. We do so when awake in bed during the stillness of night: the senses are in repose, the Brain is active.

Thus the independence of Ideation and Sensation psychologically and anatomically destroys the basis of Condillac's doctrine. But even on other grounds we may reject his theory of the origin of knowledge. It rests on two positions; —the first is the identification of all knowledge with sensation; the second is the dogma of our faculties not being innate. The first is the doctrine of Gassendi and Hobbes. It is thus stated by Diderot, one of Condillac's most celebrated pupils:—'Every idea must necessarily, when brought to its state of ultimate decomposition, resolve itself into *a sensible* representation or picture; and since everything *in* our understanding has been introduced there by the channel of sensation, whatever proceeds *out* of the understanding is either chimerical or must be able, in returning by the same road, to re-establish itself according to its sensible archetype. Hence an important rule in philosophy, That every expression which cannot find an external and sensible object to which it can thus establish its affinity, is destitute of signification.'*

This is true enough, and has already been insisted on; but although ideas have their origin in sensations, they are not themselves sensations; they are formed from sensations, but are not sensible pictures. The least experience is sufficient to convince us that we have many ideas which cannot be reduced to any *sensible picture* whatever; or, to prevent any of the ambiguity which belongs to the word 'idea,' let us rather say we have many thoughts which cannot be reduced to pure sensations. If the elements are given by Sense, they are combined in new ways by Thought. We can think of virtue or goodness, of patriotism or scoundrelism, without being able to form mental pictures of these ideas, although each element in these composite wholes is reducible to a sensation.

Now for the second point: Condillac, as already hinted, was the first to catch a glimpse of the important truth that our *faculties* are not innate—are not even connate; but he bungled in attempting to trace the genesis of these faculties. That men are not born with the powers of reasoning, remembering, imagining, is a proposition which will meet with very little credit at first. A little experience and reflection, however, show us that as the baby certainly cannot reason, remember, or imagine, these being faculties subsequently and slowly developed, we must conclude that the mental faculties are only *potentially* in the new-born child (which is saying that they are not there at all. See *Prolegomena* IV. § 52.) The baby can no more reason than he can talk. He *learns* to do both; and, before he can learn them, the powers of his cerebrum no less than the muscles of his vocal organs, must grow, be developed, and strengthened by exercise. Man is no more born with reason than an acorn is born an oak. The infant and the acorn, though they contain that within them which, under fitting circumstances, will be developed into reason in the one, and foliage in the other, cannot be said to have as yet either reason or foliage.

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* Quoted by DUGALD STEWART, *Philosophical Essays*, p. 166.

This important distinction is obtruded upon our experience in our daily observation of children. Condillac has the merit of having seen it first; but he saw it very imperfectly, and failed altogether to make any good use of it. As an example: He who told us that our faculties were not innate, but were 'acquired habits,' tells us, when he comes to the genesis of those faculties, that they spring into existence at once—are born full-grown—the acorn suddenly leaps into an oak. Thus his famous statue has Memory, Judgment, Desire, &c., as soon as it has Sensations. This is enough to show that if Condillac discovered an important fact, he only stumbled over it, and knew not its significance.* Let us hope that, if England is to produce any new system of Psychology, this most important point will not be overlooked: the growth and development of our faculties is as much a part of Psychology, as the growth and development of our organs is a part of Biology.*

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* The only person who, to our knowledge, has made any use of this fact is Dr. Beneke, who has made it the basis of his whole philosophy. See his *Neue Psychologie*, also the *Lehrbuch der Psychologie* (Berlin, 1845).

But although Condillac must be pronounced wrong in his identification of Thought with Sensation, the attempt itself was a legitimate hypothesis, and had the effect of all hypotheses, in giving a precise direction to research. It was an attempt to discover the mechanism of the mind: it could not succeed because it was an attempt to discover a mechanism by a verbal analysis of the phenomena. We shall see presently, in Hartley and Darwin, a nearer approach to the objective study of the mechanism; but before doing so, it may be well to glance at the exceptional merits of Condillac, which secured for him an European renown.

Above all praise is the transparent clearness of his language, and the painstaking effort to condense metaphysical mists into tangible water. It was an unfortunate day for French Philosophy when—in blind reaction against doctrines which were misconceived, and therefore shuddered at—men relinquished the clear language of the 18th century for the vaporous eloquence, and the mystical jargon, which dreads clearness as a ghost dreads daylight. The descent from Condillac to Maine di Biran and Victor Cousin is immense; aud a deterioration of French Philosophy has accompanied this fall.

Many excellent remarks and acute analyses will be found in Condillac's very readable volumes. I would direct attention to his explanation of what Leibnitz and Hamilton have emphasized respecting the unconscious modifications of the mind; † and to the ingenious account of Memory as the tendency of the fibres of the brain to vibrate in the way they have formerly vibrated: 'on a des idées dans la mémoire comme on a dans les doigts des pièces de clavecin: c'est

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* Since this was written (1846) Mr. HERBERT SPENCER has expounded the development of the faculties in his very remarkable *Principles of Psychology* (1855).

† *Essai sur l'Origine des Connoissances*, pp. 43 *sq.*

à dire que le cerveau a, comme tous les autres sens, la facilité de se mouvoir suivant les déterminations dont il s'est fait une habitude.'*

Although Condillac assuredly was not a Materialist in the strict sense of that term, yet, according to the lax interpretations of antagonists, his system being one which 'led to' Materialism by its identification of Thought and Feeling, and both with movements of the nerve fibres, the world has discredited his belief in the spirituality of the soul. Indeed, just as Descartes practically set aside all reference to the Creator, by expounding a system of the universe in which only matter and motion were factors; so did Condillac practically set aside all reference to a spiritual entity, by expounding a system of Psychology in which only sensation and its transformation were factors. The elimination in each case was certain to be made by successors.† And although, what is called Materialism I hold to be as entirely beside the true science of positive Psychology, as the doctrine of 'vortices' is beside the positive science of Cosmology, yet, in both cases, I regard the fundamental hypothesis in the light of an immense advance. Condillac destroyed, at any rate for a time, the metaphysical superstitions respecting mental operations. He set aside the unknowable entity, and attached himself to the knowable phenomena. Had it not been for the supposed moral and political consequences deducible from his mode of looking at phenomena, Psychology would now have been in a far more matured condition; but terror at the consequences produced a reaction against his point of view, and thus prevented a rectification of his errors, and a development of his method.

Two great schools of Psychology have divided the attention of Europe; that of Descartes, starting from pure Thought, and employing the Deductive Method; and that of Locke, starting from Sensation, and employing the Inductive Method. The main defect of the first has been the predominance of the Subjective Method, which has led to the disregard of the conditions of Thought, and all its manifold relations to the external medium. The main defect of the second has also been a too great reliance on this Method, and an imperfect appreciation of the objective relations. Occupied with the spirituality of the mind, the Cartesians have attempted to deduce conclusions from their conceptions of a spiritual substance. The rival school, taking an opposite point of departure, has been too exclusively occupied with the senses, and has confounded Sensation with Thought. The Scotch School of Psychologists attempted a compromise; but having failed to see that Psychology was a branch of Biology, continued to employ the old Subjective Method—with what results we shall see.

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* *Logique*, ch. ix. pp. 82 *sq.*

† See the chapter on DESTUTT DE TRACY, farther on.

The doctrine of transformed sensations was a step in advance, if only because it fixed the attention of psychologists upon the verifiable processes, and withdrew them from interminable and profitless discussions respecting the nature of the soul—its qualities as a spiritual substance, its modes of action as a spirit. But the doctrine was in no other sense an advance. It explained nothing; it only named anew processes already known. The traveller whom we have seen attempting to explain the phenomena of the clock (*Prolegomena*, § 19), after having rejected the hypothesis of the clock being an animal, arrived at the conclusion that the pendulum is the primary cause. Now, suppose him to have been a disciple of Condillac, he would, ingeniously enough, argue that the ticking, the striking, and the movements of the hands, were all 'transformed pendulum-motions;' which indeed they are; but what is learned by learning this, unless at the same time the mechanism of transformation be displayed? Would our traveller have known more of the clock, by knowing that its phenomena were transformed pendulum-motions? Would he have been able to regulate the clock's action, or, when some accident had disturbed its mechanism, would he have been able to repair it? Brought thus to apply his knowledge, he would have discovered its infertility; the necessity for a real analysis would have taught him the vanity of his verbal analysis.

This, then, may be said to be the significance of Condillac: he helped to withdraw men from the contemplation of a metaphysical entity, but he could not guide them in objective research. Let us see how it fared with his successors.

CHAPTER II.

HARTLEY.

§ I. LIFE OF HARTLEY.

DAVID HARTLEY, the son of a Yorkshire clergyman, was born on the 30th of August, 1705. He went to Cambridge at fifteen, and became a Fellow of Jesus College. Originally destined for the Church, he had scruples about signing the Thirty-nine Articles, and gave up the Church for Medicine, which he subsequently practised with great success.

When only twenty-five years of age, he conceived the design and commenced the execution of his celebrated *Observations on Man, his Frame, his Duty, and his Expectations*, led thereto, as he tells us in the Preface, by hearing that 'the Rev. Mr. Gay had asserted the possibility of deducing all our intellectual pleasures and pains from association.' Mr. Gay published his views in a dissertation prefixed to Law's translation of King *On the Origin of Evil*; but, although Hartley acknowledges having derived the suggestion from Gay, it is clear to all readers of his work that he had thoroughly mastered, and made his own, the principle of Association as the primary law of intellectual combination. Hartley did not publish his *Observations* till 1748, eighteen years after the scheme was first laid. The year before, according to Dr. Parr, he published a small treatise as a precursor to this work. 'You will be astonished to hear,' Dr. Parr writes to Dugald Stewart,* 'that in this book, instead of the Doctrine of Necessity, Hartley openly declares for the indifference of the will, as maintained by Archbishop King.' And the reader will be astonished to hear that Hartley does no such thing! Dugald Stewart, who had not seen the work referred to, remarks that 'it is curious that in the course of a year, Hartley's opinions on so very essential a point should have undergone a complete change;' still more curious, however, that Dr. Parr should have read the work and discovered in it such a mare's-nest. The tract in question is reprinted in the volume of *Metaphysical Tracts by English Philosophers of the Eighteenth Century. Prepared for the Press by the late Rev. Samuel Parr, D.D. London*, 1837—a volume precious to metaphysical students, because it contains Collier's *Clavis Universalis* and *Specimen of True Philosophy*. If the reader will turn to the third of these tracts, *Conjecturæ quædam de Sensu, Motu, et Idearum Generatione*, without date, he will find that it is nothing more nor less than an abstract, in Latin, of the first part of Hartley's *Observations*; and that the question of Free-will is nowhere opened in it. I can only suppose that Dr. Parr, unacquainted with physiological speculations, was misled by the admirable discussion of automatic and voluntary actions (pp. 31–35), into the notion that Hartley there espoused the doctrine of Free-will; but I am surprised that Sir W. Hamilton should have allowed the error to pass uncorrected in his edition of Stewart's Dissertation.

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* STEWART'S *Dissertation*, part ii. p. 355 of HAMILTON'S edition.

Hartley died on August 25, 1757, aged fifty-two, and left a name so distinguished for piety and goodness, that it in a great measure shielded his doctrines from the reprobation they have often incurred when promulgated by others.

§ II. Hartley's System.

Combining a suggestion thrown out by Newton at the end of his *Principia*, and in the questions annexed to his *Optics*, respecting vibrations of an ether as the cause of sensation, with the doctrine of Locke respecting Association of Ideas, Hartley produced a system of Psychology, which is historically curious as the first attempt to explain the physiological mechanism of psychological phenomena. If not worth much as a contribution to Philosophy, it is very noticeable as an effort to connect intellectual with physical phenomena; and, however subsequent writers may have ridiculed, not without excuse, the vibrations and vibratiuncles which Hartley substituted for the old metaphysical conceptions, it is certain that his attempt to explain the phenomena physiologically has very much influenced the thoughts of succeeding speculators.

'Man,' he says, 'consists of two parts, body and mind.' Does he mean by this to proclaim the existence of a distinct immaterial entity superadded to the body? According to the terms of his definition, on the first page of his work this seems to be his intention; for he defines it as 'that substance, agent, principle, &c., to which we refer the sensations, ideas, pleasures, pains, and voluntary motions.' Yet the whole system of vibrations seems to imply the contrary; and, at the close of the first part of his work, he declares that he holds himself aloof from the question altogether. He will not deny the immateriality of mind: 'On the contrary, I see clearly, and acknowledge readily, that matter and motion, however subtly divided, yield nothing more than matter and motion still. But then neither would I affirm that this consideration affords a proof of the soul's immateriality.' He thinks, with Locke, that it is quite possible the Creator should have endowed matter with sensation; but he will not undertake to affirm it as a truth. 'It is sufficient for me that there is a certain connection of one kind or other between the sensations of the soul, and the motions excited in the medullary substance of the brain.'* A more rigorous logic would have forced him into a more decided opinion; for this question of the soul's immateriality is one vitally affecting the system of vibrations; and his adversaries have had little difficulty in showing the insufficiency of 'vibrations' to explain the phenomena of an immaterial mind. Between the immaterial principle and these material vibrations, they saw an impassable gulf: let the ether vibrate never so rhythmically, it always remains 'vibrating ether,' it cannot become 'sensation,' or 'thought;' nor does Hartley bridge over the gulf by the assumption of an 'infinitesimal elementary body intermediate between the soul and the gross body,' to which, and from which, the vibrations of the nerves are communicated; the radical difficulty remains.

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* Compare also Scholium to Prop. 5 (vol. i. p. 33): 'I do not by thus ascribing the performance of sensation to vibrations excited in the medullary substance, in the least presume to assert that matter can be endued with the power of sensation. It is common to all systems to suppose some motions attendant upon sensation, since corporeal objects must by their actions impress some motion upon our bodies;' and *Conjecturæ quædam de Sensu*, &c., p. 41.

It may be objected, perhaps, that those who point out the defect in Hartley's hypothesis are themselves open to a similar charge, since they assume an immaterial principle to be affected by a material change, and assume the mind to be in connection with the body, following its alterations. But there is this difference between them and Hartley: they do not pretend to explain how mind is affected by body, he does. They accept, as an ultimate fact, what he attempts to elucidate; and it is his elucidation which they refuse to acknowledge.

His first proposition is, that, 'The white medullary substance of the brain, spinal marrow, and the nerves proceeding from them, is the immediate instrument of sensation and motion.' Modern physiologists maintain precisely the reverse of this, declaring the *grey* matter to be the seat of sensation and motion. I may say, in passing, that both these positions seem to be erroneous in their exclusiveness; and that the white as well as the grey substance must be present, just as the zinc and copper plates must both be present in the galvanic battery.

Hartley continues: 'External objects impressed upon the senses occasion, first, in the nerves on which they are impressed, and then in the brain, Vibrations of the small—or, as one may say, infinitesimal—medullary particles. These Vibrations are motions backwards and forwards, of the same kind as the oscillation of pendulums, and the tremblings of the particles of sounding bodies. They must be conceived to be exceedingly short and small, so as not to have the least efficacy to disturb or move the whole bodies of the nerves or brain. For that the nerves should vibrate like musical strings is highly absurd.'

The proof that external objects impress vibratory motions on the nerves is seen in the continuation of a sensation, 'since no motion besides a vibratory one can reside in any part for the least moment of time.' The vibrations are propagated by the ether which penetrates the pores of the nerves, and the vibrations of the ether 'agitate the small particles of the medullary substance of the sensory nerves with synchronous vibrations, in the same manner as the vibrations of the air in sounds agitate many regular bodies with corresponding tremblings.' 'One may conjecture, indeed, that the rays of light excite vibrations in the small particles of the optic nerve by a direct and immediate action. And it may also be that sapid and odoriferous particles are agitated with specific vibrations, and they communicate these directly to the small particles of the gustatory and olfactory nerves as well as to the interjacent ether.'

He uses vibrations as synonymous with sensations. 'The quantity of matter in bodies is always found to be proportional to their gravity: we may therefore either make the quantity of matter the exponent of the gravity, or the gravity the exponent of it, *according as either may be ascertained*. . . . And by a parity of reasoning, if that species of motion which we term vibrations can be shown by probable arguments to attend upon all sensations, ideas, and motions, and to be proportional to them, then we are at liberty either to make vibrations the exponents of sensations, ideas and motions, or these the exponents of vibrations, as best suits the inquiry; however impossible it may be to discover in what way vibrations cause sensations and ideas, i.e. though vibrations be of a corporeal and sensations and ideas of a mental nature.'

The passage in italics ought to have arrested him. A little reflection would have disclosed that while gravity and mass may severally be taken as exponents of each other, because sometimes one, and sometimes the other, may more easily be measured; vibrations and sensations do not stand on a similar footing. The sensation must always be more easily ascertained than the vibration—the latter indeed being hypothetical. Since Hartley wrote, the advance of science in this direction has been such as to give a high degree of probability to the general doctrine of vibrations; but even now our knowledge of sensations is much more certain, and much more easily ascertainable, than that of the vibrations actually involved. We could not use the one as exponent of the other, with the freedom of a physicist choosing between gravity and mass.

Let me here point out the radical insufficiency of Hartley's doctrine of vibrations. It is an hypothetical machinery substituted for that of Condillac, which adds nothing to our knowledge of psychical processes. To call them vibrations and vibratiuncles, or to call them sensations and transformed sensations, enlarges not our horizon. What we want is to trace the mechanism of thought; the doctrine of vibrations might help us, if from the known laws of vibratory bodies we could deduce explanations of mental phenomena hitherto unexplained—such, for instance, as the phenomena of polarisation and interference, in the case of Light. And I believe such deductions can be made; but not upon Hartley's vague theory; nor did he attempt to make any. Indeed, so entirely aloof is the hypothesis of vibrations from any psychological process, as explained by Hartley, that when Priestley abridged the work he omitted the hypothesis altogether, and it was never missed.

To say that vibrations produce sensations throws little light. What is the specific velocity and sweep of each vibration? *That* would be valuable knowledge. The researches of modern physicists have measured with surprising accuracy the *kind* of vibration which determines each specific sound and each specific colour, and which determines the sensation of heat; but they have not yet measured the vibrations which determine touch, tickling, taste or smell. Hartley never thought of descending from the generalities to such specialities. He contented himself with calling sensations vibrations, as his predecessors had called them motions of animal spirits. In no respect can I detect an advance upon the doctrine so well expounded by the Cartesian, De la Forge.* The only effect of the hypothesis is to make his work repulsive and slightly ridiculous in the eyes of some readers, and needlessly wearisome to others.

Moreover, note how entirely the biological method was disregarded even by a physician who had so far escaped from the metaphysical trammels as to reduce intellectual phenomena to vibrations. The clock was not 'taken to pieces' even by Hartley. Subjective analysis still furnished the datum which objective analysis would speedily have disclosed to be false, namely, that ideas were faint sensations, and that both sensations and ideas had one seat.

But although, like Condillac, Hartley failed to throw any light upon the physiological process, he carried still further than Condillac the fertile suggestion that psychological processes were in truth physiological, and must be sought in the organic mechanism; and he has the immense superiority over Condillac, that having clearly seen the significance of the fundamental Law of Association, he was enabled to give that Law an extent of application no one had previously suspected. Nay, more; he applied it to those physiological phenomena which still interest and perplex philosophers, namely, the voluntary and involuntary actions. His twenty-first proposition, and the elucidations which follow, deserve to be read even at the present day.†

The Law of Association, by which most if not all our intellectual processes are regulated, has been copiously illustrated by Scotch and English psychologists, though scarcely used by the German and French; and whoever sees the importance of the Law will be grateful to Hartley for his services in establishing it; the more so because the vibrations and vibratiuncles have long since passed into the limbo of abortive efforts, and Hartley's name is seldom cited.

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* De la Forge: *Remarques sur l'Homme de René Descartes.* Paris, 1729, pp. 190–7.

† The student may also compare the passage in the *Conjecturæ*, p. 34.

CHAPTER III.

DARWIN.

ALTHOUGH even more neglected than Hartley by the present generation, Darwin, once so celebrated, deserves mention here as one of the psychologists who aimed at establishing the physiological basis of mental phenomena.

Erasmus Darwin was born at Elton, near Newark, on the 12th of December, 1731. After studying at St. John's College, Cambridge, and taking his degree of Doctor of Medicine at Edinburgh, he established himself as a physician in Lichfield, married twice, had three sons, and died in the seventieth year of his age, on the 18th of April, 1802. As a poet, his *Botanic Garden* (1781) by its tawdry splendour gained him a tawdry reputation; as a philosopher, his *Zoonomia*; *or Laws of Organic Life* (2 vols. 4to. 1794–6) gained him a reputation equally noisy and fleeting.

Although couched in different language, Darwin's theory is substantially the same as Hartley's: for 'vibrations' he substitutes 'sensorial motions.' By the sensorium Darwin means 'not only the medullary part of the brain, spinal marrow, nerves, organs of sense, and of the muscles; but also at the same time that living principle, or spirit of animation, which resides throughout the body without being cognisable to our senses, except by its effects.' The changes which occasionally take place in the sensorium, as during the exertions of volition, or the sensations of pleasure or pain, are termed *sensorial motions.**

The medullary substance, he thinks, passes along the nerves and mingles with the muscular fibres. The 'organs of sense consist in like manner of moving fibres enveloped in the medullary substance.' The word *idea* has various meanings, he says, and to give it precision he defines it as 'a contraction or motion, or configuration of the fibres which constitute the immediate organ of sense. Synonymous with the word *idea* we shall sometimes use the words *sensual motion*, in contradistinction to *muscular motion*.'

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* *Zoonomia*, vol. i. p. 10

He then undertakes to prove the existence of these sensual motions, and deduces from this proof the fact that as we advance in life all the parts of our bodies become rigid, and are consequently less susceptible of new habits of motion, though they retain those already established. Hence only the young can learn; hence the aged forget the events of yesterday and remember those of infancy.*

'If our recollection, or imagination, be not a repetition of animal movements, I ask, in my turn, What is it? You tell me it consists of images or pictures of things. Where is this extensive canvas hung up?—or where the numerous receptacles in which these are deposited?—or to what else in the animal system have they any similitude? That pleasing picture of objects, represented in miniature on the retina of the eye, seems to have given rise to this illusive oratory! It was forgot that this representation *belongs rather to the laws of light than to those of life*; and may with equal elegance be seen in the camera obscura as in the eye; and that the picture vanishes for ever when the object is withdrawn.'†

Had Darwin left us only the passage just cited, we should have credited him with a profounder insight into Psychology than any of his contemporaries, and the majority of his successors, exhibit; and although the perusal of *Zoonomia* must convince every one that Darwin's system is built up of untenable hypotheses, Darwin deserves a place in history for that one admirable conception of Psychology as subordinate to the laws of life. So little has this conception been appreciated, that not only are systems of Psychology constructed in serene indifference to Physiology, but many of the questions agitated in mental Physiology are hopelessly entangled because men will not, or cannot, discriminate between problems of Physics and problems of Physiology; between phenomena regulated by laws of inorganic matter, and phenomena regulated by laws of organic matter. Thus the questions, Why with two eyes do we see objects *single*? and, Why do we not see objects *inverted*, since their images are inverted on the retina? have puzzled thousands; and not one of the attempted solutions has recognised the important fact that the problems are *psychological*, not optical nor anatomical, consequently cannot be settled by optics and anatomy; angles of incidence, and decussation of optic nerves, have nothing to do with the phenomena the moment after the Sensational Centre has been affected. We might as well attempt to deduce the assimilation of sugar from the angles of its crystals, or from the sand-like disposition of its grains, as to deduce the perception of an object from the laws of optics: the crystals and grains of sugar must first be *destroyed*, and the sugar made soluble, before it can be assimilated; the retinal images must, in like manner, first be transformed in the Sensational Centre before they can, through that Centre, affect the Cerebrum.

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* *Zoonomia*, vol. i. p. 27.

† *Ibid.* p. 29. In Bain's *Senses and the Intellect*, p. 60 *sq.*, the reader will find the old theory of a *sensorium*, or chamber of images, which Darwin here pushes aside, satisfactorily refuted from the physiological point of view.

That this is no gratuitous hypothesis, but expresses the actual process of perception, in as far as that process has been ascertained, may perhaps be made clear from the following considerations: When I say that the perception of a visual object is a psychological act, not in any way explicable by the laws of optics, or by any investigation of the anatomical structure of the optic apparatus, I ground that assertion on certain authoritative facts; for example, I take up the vexed question of our perceiving an object as single, although two images are formed on the two retinas; and instead of endeavouring to explain it by delicate anatomy of the retina, or the decussating fibres of the optic nerves, I at once remove it from that circle of discussion by classing it with phenomena precisely analogous. We see objects single with two eyes; but we also hear sounds as single with two ears; we smell odours as single with two nostrils; we feel objects as single with five fingers. How is it that no physiologist has reflected on the bearing of these facts? If the ordinary explanations of optical perception are correct, why do not auditory and olfactory nerves decussate, and so the whole mystery be cleared up? No sooner is attention called to the fact of single hearing and single smelling, with two auditory and two olfactory nerves, than we at once cease to regard single vision with two optic nerves as anything special, and we try if a psychological explanation will not avail. I believe the explanation to be very simple. *We cannot have two precisely similar sensations at precisely the same instant; the simultaneousness of the two sensations renders them indistinguishable.* Two sounds of precisely the same pitch and intensity, succeeding each other by an *appreciable* interval, will be heard as two sounds; but if they succeed each other so rapidly that the interval is inappreciable, no distinction will be felt, and the two will be heard as one, because heard simultaneously.

The fact of our being able to see an image reflected on the retina of an animal, and of our being able to explain on optical principles the formation of that image, has very much misled physiologists in their efforts to comprehend the sensation; they have naturally imagined that in vision we see the retinal image; whereas, unless I am altogether mistaken, we see nothing of the kind—we are affected *by* that retinal image, as in hearing we are affected by a wave of air, but do not perceive the wave; or as in smelling we are affected by the action of volatile substances on the olfactory nerve, but do not perceive the substances. We only perceive the changes effected in us by these agents.

The various Sensational Centres are *variously* affected by the *same* external stimuli: electricity giving to the gustatory nerve the stimulus of savorous bodies, to the auditory nerve the stimulus of sonorous vibrations, to the optic nerve the stimulus of luminous bodies, to the tactile nerves the stimulus of touch. Pressure on the eye causes luminous spots to be seen; we seem to see fire-flies. The pressure of over-distended blood-vessels produces spectral illusions, and we *see* daggers in the air as vividly as any at our sides. Unhappy students well know the 'singing in the ears' produced by over-study. Nor is this all: narcotics introduced into the blood excite in each Sensational Centre the specific sensation normally excited by its external stimuli: giving the appearance of luminous spots to the eyes, of singing in the ears to the auditory nerves, and of 'creeping sensations' to the nerves of touch.

The reason of this is that each Sensational Centre has its specific manner of reacting, no matter what the nature of the thing affecting it. While only certain things affect it sensationally, all those which *do* affect it, do so in a specific manner. Light, for instance, affects the optic centre, but produces no appreciable effect on the auditory, gustatory, or tactile centres; nevertheless the optic centre may be affected by pressure, by narcotics, or by electricity, precisely in the same way as by light. The vibrations of a tuning-fork, which affect the auditory centre as sound, affect the tactile centre as 'tickling,' not 'sound.'

From these indubitable facts it is not difficult to elicit a conclusion, namely, that the character of a sensation depends on the Sensational Centre and not on the external stimulus; that stimulus being only the cause of the sensational change. Whether the retina be directly affected by rays of light issuing from an object, or the optic centre be affected by the pressure of congested blood-vessels, in each case we *see*, in each case the optic centre is affected in that specific manner in which alone it is capable of being affected. Consequently inasmuch as the visual sensation depends on the optic centre being affected, and does *not* depend on the formation of an image on the retina, we have no alternative but to admit that the *retinal affection is transformed by the Sensational Centre*, and there the *impression* first becomes a *sensation*.

It may be added as confirmation of the foregoing doctrine respecting the centre as the seat of sensation, that Müller has cited examples of luminous spectra being excited by internal causes after the complete destruction of the retina, and 'Luicke relates the case of a patient who after the extirpation of the eye for fungoid disease perceived all kinds of luminous appearances independently of external objects.'*

When therefore it is asked, Why do we see objects *erect*, when they throw *inverted* images on the retina? the answer is, Because we do not see the retinal image at all; we see, or are affected by, the object; and our perception of the erectness of that object does not depend on vision, but on our conceptions of space and the relations of space—which are not given in the visual sensation, but are ideal conceptions: conceptions which are acquired in a complicated series of inferences, according to most philosophers; which are 'forms of intuition,' according to Kant; but which are by no school held to be immediate elements of optical sensation.

We thus return to the position that in every act of consciousness the impression on the nerve becomes transformed into a sensation only in the Sensational Centre; and the old theories of 'eidola,' 'images,' 'impressions,' are seen to be untenable. Just as the crystals of sugar have to be decomposed, and the sugar transformed into glucose, the glucose transformed into lactic acid, before sugar can be assimilable in the organism, so have the retinal images to be decomposed in the optic centre before a visual *sensation* can be produced. Attempt a more direct process, and failure is inevitable: cane-sugar injected into the veins is expelled in the urine as a foreign substance, not assimilable; and, in like manner, the most dexterous adjustment of rays of light falling *immediately* on the optic ganglion, not transmitted thereto by the optic nerve, would produce no visual sensation.

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* Müller: *Physiology*, Eng. Trans. i. 1072.

To call sensations and ideas by the vague name of motions, is to violate the conditions of philosophic language, and to mislead those who accept it into the belief that an explanation has been given in the change of term. That Darwin was by it misled into absurdity will be apparent in the following attempt to explain perception:—

'No one will deny,' he says, 'that the medulla of the brain and nerves has a certain figure; which, as it is diffused through nearly the whole of the body, must have nearly the figure of that body. Now it follows that the spirit of animation, or living principle, as it occupies this medulla and no other part, has also the same figure as the medulla . . . which is nearly the figure of the body. When the idea of solidity is excited, a part of the extensive organ of touch is compressed by some external body, and this part of the sensorium so compressed exactly resembles *in figure* the figure of the body that compressed it. Hence when we acquire the idea of solidity we acquire at the same time the idea of *figure*; and this idea of figure, or motion of *a part* of the organ of touch, exactly resembles *in its figure* the figure of the body that occasions it; and thus exactly acquaints us with this property of the external world.' *

He is thus brought back to the old conception of the mind being 'impressed' by the exact forms of objects, as wax is impressed by a seal. As he proceeds he gets more and more absurd. Thus he says, although 'there may exist beings in the universe that have not the property of solidity; that is, which can possess any part of space at the same time that it is occupied by other bodies; yet there may be other beings that *can assume this property of solidity or disrobe themselves of it occasionally*, as we are taught of spirits and of angels; and it would seem that the *spirit of animation* must be endued with this property, *otherwise how could it occasionally give motion to the limbs of animals?*—or be itself stimulated into motion by the obtrusions of surrounding bodies, as of light or odour?' † He is led to this by the Spinozistic axiom, that 'no two things can influence or affect each other which have not some property common to both of them,' which axiom destroys the possibility of spirit acting on body. Hartley, as we saw, tried to get over this difficulty by assuming the existence of a substance intermediate between body and spirit. Darwin finds it easy to assume that the spirit has the power of putting on or putting off the properties of matter just as it pleases. 'Hence the spirit of animation at the time it communicates or receives motion from solid bodies must itself possess some property of solidity. And at the time it receives other kinds of motion from light, it must possess that property which light possesses to communicate that motion named Visibility. In like manner it possesses Saporosity, Odorosity, Tangibility, and Audibility.'*

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* *Zoonomia*, pp. 111–12.

† *Ibid.* p. 114.

This is enough to show how little Darwin understood the real value of his luminous idea respecting Psychology based on the laws of life; enough also to make everyone understand how philosophers rebelled against such 'materialism' as issued from the explanation of mental phenomena by 'sensory motions.' Before finally quitting the *Zoonomia* we must pause a moment over the explanation of our feeling for Beauty. He describes the sensations of the babe when 'soon after it is born into this cold world it is applied to its mother's warm bosom,' and the agreeable influences which thus grow up in the mind associated with the form of the bosom, 'which the infant embraces with its hands, presses with its lips, and watches with its eyes; and thus acquires more accurate ideas of the form than of the odour, and flavour, or warmth, which it perceives by its other senses. And hence in our maturer years, when any object of vision is presented to us, which by its waving or spiral lines, bears any similitude to the form of the female bosom,—whether it be found in a landscape with soft gradations of rising and descending surface, or in the form of some antique vases, or in the works of the pencil or chisel—we feel a general glow of delight which seems to influence all our senses; and if the object be not too large, we experience an attraction to embrace it with our arms, and to salute it with our lips, as we did in our early infancy the bosom of our mother.'* One of the happiest illustrations of the generally false saying, that ridicule is a test of truth, is the reply of Sheridan to this theory of Beauty. 'I suppose,' said he, 'that the child brought up by hand would feel all these emotions at the sight of a wooden spoon!'

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* *Zoonomia*, i. 115.

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* *Zoonomia*, i. 145.

CHAPTER IV.

DESTUTT DE TRACY.

THE germinal error of Descartes was developed by Spinoza into a system from which Philosophy shrank back appalled. The germinal error of Locke was developed by Berkeley and Hume into systems equally repugnant to common-sense. The germinal error of Condillac was developed by the Sensational School, and received its logical expression in Destutt de Tracy: and Philosophy in alarm once more threw herself into the arms of the theological party, calling upon Metaphysics and Rhetoric for aid in her distress.

Condillac, as we have seen, admitted the existence of a spiritual entity, over and above the faculties and their acts (which he identified with sensations). But in his system this entity was a superfluous existence. It was altogether inoperative; being neither the seat of the mind's actions, nor the shaping cause of them. The faculties, which Locke had vaguely presupposed as existent in every mind, Condillac declared to be evolved in the act of sensation. Now De Tracy came to suppress Condillac's inoperative entity. Laplace told Napoleon that the simple reason why, in his exposition of the system of the world, he had not mentioned the Creator, was because 'he had no need of that hypothesis.' In the same way De Tracy had no need of the hypothesis of a spiritual entity, in expounding the system of mental phenomena.

Antoine Louis Claude Destutt de Tracy was born July 20, 1754. His family was of Scotch extraction. The clan Stutt having sent four of its sons to join the Douglas in his defence of Charles VII. against the English, these young soldiers, after serving in the *Garde écossaise* of Charles and

Louis XI., were endowed with lands in the Berri; and from one of them, married to a De Tracy of Nivernais, descended the philosopher.

After serving a brilliant career as a soldier, De Tracy joined the revolutionary party and sat in the Constituent Assembly by the side of Lafayette. Becoming *suspect,* like so many other patriots, he was imprisoned, and would assuredly have perished on the 11th Thermidor—the day fixed for his trial—had not the memorable events of the 9th Thermidor suddenly put an end to the Reign of Terror. It was during his imprisonment, indeed only four days before the 9th Thermidor, that he conceived the design of the system he was afterwards to develop. Having previously prepared himself for scientific investigation by assiduously following in the footsteps of Fourcroy and Lavoisier, he resolved on analysing Thought as these great investigators analysed Matter.

Condillac was his guide. From him was borrowed the principle that sensation was not simply the primitive element of all intelligence, but the sole element. All the faculties, all the acts of the mind, were reduced to sensation. 'On voit que je réunis et confonds dans la faculté générale de sentir, ce que l'on a coutume de distinguer en *affections* et *connaissances*, et ce qu'on appelle souvent, en termes métaphoriques et peu exacts, l'esprit et le cœur. Effectivement, je crois que cette division n'est pas fondée.'* There were four fundamental acts: perception, which was the sensation of objects; memory, the sensation of remembrances; judgment, the sensation of relations; and will, the sensation of desires.

The three first faculties are our means of acquiring knowledge. The fourth is our means of action. That all four are due to the senses is evident. The external object produces an impression on our nerves, and the nerves, by a movement peculiar to them, transmit this impression to the brain. The brain, which is endowed with a peculiar force [not defined or otherwise described] receives the impression, and converts it into (1) a perception, if the object be present; into (2) a remembrance, if the object be absent; into (3) a relation, if several objects at once bring the image of their resemblances or their differences; into (4) a ratiocination, if there are several relations; and, finally, if the object rouses desire, it provokes another movement to satisfy it; and this produces *action,* as the previous movement produced *knowledge.* Thus knowing and willing are the resultants of two organic operations, one dependent on the other.

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* *Idéologie*, Paris, 1825, iii. p. 102. *Logique*, chap. ii.

It is needless, after what has already been said, to point out the defects of this system. All we have to note here is its logical development of Condillac's germinal error. As in Condillac, we find in De Tracy much admirable analysis, and some suggestions which Psychology may profit by. One luminous principle he had conceived, namely, that Psychology is a part of Biology; *L'idéologie est une partie de la zoologie.* It was this principle which Cabanis asserted still more effectively.

CHAPTER V.

CABANIS.

PIERRE JEAN GEORGES CABANIS was born on the 5th of June, 1757, at Conac near Brives. The dear friend of De Tracy, he was both prized as a thinker by Turgot, D'Holbach, Franklin, Condorcet, Mirabeau, Diderot, and D'Alembert, and prized as a physician by numerous patients. He died on the 6th of May, 1808.

We have traced the course of psychological investigation in its attempts to detect the mechanism of mind up to the point it had attained in the system of De Tracy. The announcement that ideology was a part of zoology, is but the systematic expression of a tendency dimly discernible even in Locke, who, as Victor Cousin complains, is fond of drawing facts from savages, children, and animals. Condillac in his *Traité des Animaux* had boldly claimed the validity of inferences deducible from animals; but a thorough application of the Comparative Method was not practicable at that period.

The prejudices of that age forbade it. The ignorance of that age made it impossible. Comparative Physiology is little older than Goethe, and Comparative Psychology is only now glimmering in the minds of men as a possibility. If men formerly thought they could understand man's body by dissecting it, and did not need the light thrown thereon by the dissection of animals; they were still less likely to seek psychical illustrations in animals, denying, as they did, that animals had minds.

The school of Locke, therefore, although regarding Mind as a property of matter, consequently directing attention to the human organism, trying to understand the mechanism of sensation, and thus dealing with tangible realities instead of with impalpable and ever-shifting entities, was really incompetent to solve the problems it had set itself, because its Method was imperfect, and its knowledge incomplete. The good effect of its labours was positive; the evil, negative. Following out this positive tendency, we saw Hartley and Darwin advancing still nearer to a true Method;—by a bold hypothesis, making the phenomena dependent on vibrations in the nerves; thus leading to a still more precise and *definite* consideration of the organism.

These were, however, tentatives guided by no distinct conception of the necessary relation between organ and function; and the commencement of the biological Method, truly so called, must be sought in the work of Cabanis: *Rapports du Physique et du Moral de l'Homme.**

A disciple of Condillac, he nevertheless saw, more distinctly than any man before him, one radical vice of Condillac's system, namely, the limitation of mental phenomena to sensations, and the non-recognition of connate instincts. If sensation were the admitted source of all mental phenomena (and Cabanis rightly made these phenomena include more than 'ideas'), it became the duty of philosophers to examine the nature of sensation itself. 'No one,' he says, 'had clearly explained in what the act of sensibility consists. Does it always presuppose consciousness and distinct perception? And must we refer to some other property of the living body all those unperceived impressions and movements in which volition has no part?' To put this question was to inaugurate a new study. It became necessary to examine whether all mental phenomena were not reducible to the fundamental laws of Sensibility. 'All the while that the Intellect is judging and the Will is desiring or rejecting, many other functions are going on, all more or less necessary to the preservation of life. Have these diverse operations any influence, the one on the other? And is it possible from the consideration of different physical and moral states, which are observed simultaneously, to seize the relations which connect the most striking phenomena, with such precision as to be certain that in the other less obvious cases, if the connection is less easily detected, it is so simply because the indications are too fugitive?'

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* This work originally appeared as a series of *Mémoires* read before the Institute (1798–99). It was published as a separate book in 1802, under the title *Traité du Physique et du Moral de l'Homme*; which title is also borne by the second edition of 1805. Not until 1815, and after the death of Cabanis, was the word *Rapports* substituted for *Traité*.

This conception of a possible Psychology is in itself enough to mark for ever the place of Cabanis in the History of Philosophy. It establishes Psychology as one branch of the great science of Life. It connects the operations of intelligence and volition with the origin of all vital movements. It makes Life and Mind correlatives. This was a revival of the great truth clearly recognised by Aristotle, from whom it descended to the Schoolmen. 'Impossibile est,' says Aquinas, very emphatically, 'in uno homine esse plures animas per essentiam differentes, sed una tantum est anima intellectiva, quæ vegetativæ et sensitivæ et intellectivæ officiis fungitur.' The division of Life and Mind as two distinct entities was introduced by the Italians of the Renaissance, adopted by Descartes and Bacon, and once more rejected by Stahl, who returned to the Aristotelian conception. With the fall of Stahl's doctrine, the separation of Mind from Life again became the dictum of the schools, until Cabanis; no one since Cabanis seems to have been thoroughly impressed with the unity of the two till Mr. Herbert Spencer presented it as the basis of psychological induction.* The consequences were immediate: if Mind was to be studied as one aspect of Life, it could only be efficiently studied on that inductive and experimental Method which had reached the certain truths of positive science: 'Les principes fondamentaux seraient également solides; elles se formeraient également par l'étude sévère et par la composition des faits; elles s'étendraient par les mêmes méthodes de raisonnement.' Cabanis warns his readers that they will find nothing of what is called Metaphysics in his book; they will only find physiological researches, '*mais dirigées vers l'étude particulière d'un ordre de fonctions.*'

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* SPENCER: *Principles of Psychology*, 1855.

In the purely physiological direction, indeed, Cabanis had many predecessors, from Willis in the middle of the seventeenth century, to Prochaska, who preceded Cabanis by one year only.* The nervous system had of course been studied by physiologists, and this study led them to form psychological theories; but although we may find elsewhere, especially in Unzer and Prochaska, sounder views of the physiology of the nervous system, we find nowhere so clear and large a conception of physiological Psychology as in Cabanis.

'Subject to the action of external bodies,' he says, 'man finds in the impressions these bodies make on his organs at once his knowledge and the causes of his continued existence; for to live is to feel; and in that admirable chain of phenomena which constitute his existence, every *want* depends on the development of some *faculty*; every faculty by its very development satisfies some want, and the faculties grow by exercise as the wants extend with the facility of satisfying them. By the continual action of external bodies on the senses of man, results the most remarkable part of his existence. But is it true that the nervous centres only receive and combine the impressions which reach them from these bodies? Is it true that no image or idea is formed in the brain, and that no determination of the sensitive organ takes place, other than by virtue of these same impressions on the *senses* strictly so called?' †

This question cuts away the very root of Condillac's system. Cabanis had no difficulty in showing that Condillac's limitation of our mental phenomena to the action of the special senses was a contradiction of familiar experience, e. g. the manifold influence exercised by the age, sex, temperament, and the visceral sensations generally. A survey of the human organism, compared with that of animals, conducted him to the following conclusions:—

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* *Lehrsätze aus der Physiologie des Menschen*, 1797. Curiously enough, the second and third editions of this work were exactly contemporaneous with the second and third editions of CABANIS, 1802 and 1805 (counting the publication in the *Mémoires de l'Institut* as one edition). It is not to be supposed that CABANIS knew of PROCHASKA's existence; nor is there more than a general resemblance in their physiological conclusions.

† *Deuxième Mémoire*, § ii.

'The faculty of feeling and of spontaneous movement forms the character of animal nature.

'The faculty of feeling consists in the property possessed by the nervous system of being warned by the impressions produced on its different parts, and notably on its extremities. These impressions are internal or external.

'External impressions, when perception is distinct, are called *sensations.*

'Internal impressions are very often vague and confused, and the animal is then only warned by their effects, and does not clearly distinguish their connection with the causes.

'The former result from the application of external objects to the organs of sense; and on them *ideas* depend.

'The latter result from the development of the regular functions, or from the maladies to which each organ is subject; and from these issue those determinations which bear the name of *instincts.*

'Feeling and movement are linked together. Every movement is determined by an impression, and the nerves, as the organs of feeling, animate and direct the motor organs.

'In feeling, the nervous organ reacts on itself. In movement it reacts on other parts to which it communicates the contractile faculty, the simple and fecund principle of all animal movement.

'Finally, the vital functions can exercise themselves by the influence of some nervous ramifications, isolated from the system: the instinctive faculties can develope themselves, even when the brain is almost wholly destroyed, and when it seems wholly inactive.

'But for the formation of thoughts it is necessary that the brain should exist, and be in a healthy condition: it is the special organ of thought.'*

He justly repudiates any attempt to explain Sensibility: it must be accepted as a general property of organised beings, in the same way that attraction is accepted as a general property of bodies. No general property admits of explanation. It can only be subordinated to some other property, and be explained by it, on the supposition that it is *not* general. Accepting Sensibility therefore as an ultimate fact in the organic world, Cabanis detects its phenomena running through all those called vital and all those called mental.

'It is something,' he says, 'to have established that all ideas and all moral phenomena are the results of impressions received by the different organs; and I think a still wider step is taken when we have shown that these impressions have appreciable differences, and that we can distinguish them by their seat and the character of their products, although they all act and react on each other, on account of the rapid and continual communications with the sensitive organ.'† The object of his treatise is to examine the relations existing between the moral and physical conditions, how the sensations are modified by modifications in the organs, how ideas, instincts, passions are developed and modified by the influences of age, sex, temperament, maladies, &c. It is not therefore a treatise on Psychology, but contributions towards a science of Psychology, and as such may still be read with advantage, although the science of the present day rejects many of its physiological details. He foresaw that this would be so, 'Le lecteur s'apercevra bientôt que nous entrons ici dans une carrière toute nouvelle. Je n'ai pas la prétention de l'avoir parcouru jusqu'au bout; mais des hommes plus habiles et plus heureux achèveront ce que trop souvent je n'ai pu que tenter.'

As a specimen of inductive Psychology, we must not pass over in silence his experimental proof of instinct being developed by certain organic conditions. He takes one of the most marvellous of instincts, that of maternal love, and having analysed its physiological conditions, he says, 'In my province, and some of the neighbouring provinces, when there is a deficiency of sitting hens, a singular practice is customary. We take a capon, pluck off the feathers from the abdomen, rub it with nettles and vinegar, and in this state of local irritation place the capon on the eggs. At first he remains there to soothe the pain; soon there is established within him a series of unaccustomed but agreeable impressions, which attaches him to these eggs during the whole period of incubation; and the effect is to produce in him a sort of factitious maternal love, which endures, like that of the hen, as long as the chickens have need of aid and protection. The cock is not thus to be modified; he has an instinct which carries him elsewhere.'

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* *Deuxième Mémoire,* § viii.

† *Ibid.* § v.

The novelty of the conception which Cabanis put forth, and the interest attached to many of his illustrations, made his work very popular; but its influence was only indirect. The ignorance which almost all psychologists continued to display, not only of Physiology, but of the necessity of a physiological Method, together with the alarm excited by the accusation of 'materialism,' aided as it was by the reaction mainly political, but soon extending itself to philosophical questions, which condemned the labours of the eighteenth century, left Cabanis with few adherents and no continuers. In elaborate works the brain was still designated as the 'organ of the Mind,' but the Mind was passionately declared *not* to be the function of the brain; the profounder views of Cabanis, which regarded Mind as one aspect of Life, were replaced by the old metaphysical conceptions of *le Moi*,—the Ego,—the immaterial Entity *playing upon* the brain as a musician plays upon an instrument.* Instinct was no longer regarded as determined by the organism, changing with its changes, rendered abortive by mutilations, and rendered active by stimulation; but as a 'mysterious principle implanted' in the organism: a 'something' which, although essentially mysterious and unknowable, appeared to be perfectly well known to the metaphysicians.

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* One living writer, of authority, has gravely declared that mental fatigue is the consciousness which the *mind* has of the *brain's* weariness! In our confessed inability to understand what matter *is*, why will men persist in dogmatising on what it *is not?*

By an unfortunate phrase, Cabanis gave his antagonists an advantage, and impeded the progress of his own views. He was understood to say that the brain secretes thought as the liver secretes bile. He said nothing of the kind; but his language lent itself easily to the misconception; and the ridicule and disgust which assailed it seriously damaged the dignity of the physiological method. This is what he did say: 'Pour se faire une idée juste des opérations dont résulte la pensée, il faut considérer le cerveau comme un organe particulier destiné spécialement à la produire (had he stopped here, few would have seen anything to cavil at; but he added), de même que l'estomac et les intestins à opérer la digestion, le foie à filtrer la bile.' * This is really saying no more than that thought is the function of the brain; and the difference between that, and the ordinary conception of the brain as 'the organ of the mind,' is simply the difference between precise and lax language. But the unlucky words 'digestion,' and the 'secretion of bile,' made many readers suppose that Cabanis held thought to be a secretion.

It is true that the language of Cabanis is ambiguous, and leads to the interpretation that thought is a secretion, although he really means that thought is a function. Such ambiguity is deplorable. But that it was merely a verbal laxity may be seen in the following passage. 'We see the aliments fall into the stomach; we see them pass out with new qualities, and we conclude that it has impressed on them a real alteration. We also see the impressions reaching the brain by the channels of the nerves; they are then isolated and without coherence. The organ (*viscère*) reacts upon them, and soon metamorphoses them into ideas, which speech and gesture manifest externally. We conclude with the same certitude that the brain digests, so to speak the impressions,—qu'il fait organiquement la sécrétion de la pensée.' When a man permits himself to say that we *see* impressions reaching the brain through the nerves, and see the brain metamorphose these impressions into ideas, he may permit himself to say that thought is a secretion; but that this was not really his opinion will appear on an attentive study of his work. Like most psychologists and biologists, he had but hazy conceptions of function; and like most of the writers of his school, he had but an imperfect sense of the value of accuracy of expression. But I do not think that he meant what he is supposed by antagonists to have meant. I think he meant simply to indicate that thought was a function of the brain, as digestion was a function of the intestinal canal.

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* CABANIS: *Rapports*, ii. *Mémoire*, § vii.

Certainly, if he did regard thought as a secretion, the error was monstrous, and the outcry against him was justifiable. I shall have to recur to this subject in speaking of the materialism of certain writers of our own day in Germany.

CHAPTER VI.

SUMMARY OF THE SIXTH EPOCH.

CONSIDERED as a contribution to Philosophy, the labours of the Sensational School have mainly an indirect value. They found Philosophy reduced to a question of Psychology, and found Psychology itself in so imperfect a condition as to be unable to give any reliable guidance. The question of the origin of knowledge necessarily involved the whole subject of mental operations. To determine whether we had any ideas independent of Experience, it became necessary to ascertain what Experience was—what were its conditions and limitations. To determine this, it was necessary to ascertain the relations of the mind to the body. If once it could be settled that the phenomena of mind were simply phenomena of the organism, a positive science of Psychology would become possible, and its results would have the same validity as those of the physical sciences. From the earliest times Philosophy had admitted that the Mind only manifested itself through the organs of the Body, and that these manifestations were all subject more or less to material conditions. But from the time of Descartes there had been a strong repugnance against every suggestion which seemed to rob the Intellect of its entity, by identifying mental with vital phenomena. The independence of the Mind as an entity was regarded as a first truth, required by Metaphysics no less than by Theology. To doubt this truth was to 'overthrow all morality, to reduce man to the level of the brute, to make Religion a mockery.' To doubt this truth was, in fact, to incur the most incriminating of charges—Materialism.

Nevertheless, good and pious men were forced to doubt this first truth, in spite of the odium which they knew would fall on them. And although partly from terror, and partly from the effect of old metaphysical prejudice, most of the Sensational School clung to some vague admission of a spiritual entity, whose active interference was, however, quietly ignored, nevertheless the inevitable tendency of their teaching was clearly seen by antagonists, and finally avowed by their successors.

A decision became indispensable. If the Intellect were admitted as an independent existence, having powers not gathered from organic conditions, there could be no *scientific* exposition of the conditions and limitations of human knowledge. It was always open to assume the existence of innate ideas, of truths transcending those gained through experience, and of criteria not amenable to the canons of experience. But if (the existence being admitted) all the operations of the mind were limited by organic conditions, then indeed a science became possible, but the preliminary hypothesis became superfluous.

To this dilemma the Sensational School had successfully brought Philosophy. It had presented the alternative of considering Psychology as a branch of Biology, and Mind as only one aspect of the equally mysterious Life; or of once more falling back upon Metaphysics which modern Science gloried in having escaped from for ever.

The first issue was too repulsive for the majority of philosophers. It was repulsive because it disturbed the sacred associations of awe which surrounded the mystery of Mind, and because it was said by antagonists to lead to degrading and immoral conclusions; which it did *not*, and which it could not lead to, if true; though antagonists chose to affirm that it was not true, because they assumed that it led to the immoral conclusions. While thus repulsive in its first aspect, it had the great disadvantage of not being sufficiently precise in its indications, or coercive in its arguments, to carry conviction to the unwilling mind. No great depth or subtlety was required to see that Hartley and Darwin, De Tracy and

Cabanis, were far from accounting satisfactorily for the phenomena; yet only by the force of demonstration could their disagreeable conclusions get acceptance.

There was, therefore, a general revolt. The second issue was eagerly chosen. The reaction in favour of Metaphysics triumphed for a time over what was called the Eighteenth Century Philosophy, though its real struggle was with the Sensational School. We shall trace that reaction in Scotland, Germany, and France.

SEVENTH EPOCH.

Second Crisis: Idealism, Scepticism, and Sensationalism producing the reaction of Common Sense.

CHAPTER I.

REID.

DUGALD STEWART opens his *Account of the Life and Writings of Thomas Reid* with remarking that the life was 'uncommonly barren of those incidents which furnish materials for biography;' and as our space is scanty, we will content ourselves with a bare enumeration of such facts as may be useful for reference. Thomas Reid was born in 1710, at Strachan, in Kincardineshire. He was educated at Marischal College, Aberdeen. In 1752 he occupied the chair of Moral Philosophy in Aberdeen. In 1764 appeared his *Inquiry into the Human Mind on the Principles of Common Sense.* 'In 1763* the *Inquiry* received a still more substantial testimony of approbation from the University of Glasgow,' in the offer of the chair of Moral Philosophy, vacant by the resignation of Adam Smith. In 1780 Reid resigned his office, and passed the remaining years of his life in retirement and study. In 1785 appeared his *Essays on the Intellectual Powers.* He died in Glasgow in 1796, having survived four of his children.

Reid's Philosophy made a great stir at first, but has for some years past been sinking into merited neglect. The appeal to Common Sense as arbiter in Philosophy is now pretty well understood to be on a par with Dr. Johnson's kicking a stone as a refutation of Berkeley. Indeed Dugald Stewart himself was fully alive to the inconsequence of such an argument, and endeavoured to shield his master by saying that the phrases 'Common Sense' and 'Instinct' were unhappily chosen. Unfortunately they were not mere phrases with Reid; they were principles. It is impossible to read the *Inquiry* and not see that Reid took his stand upon Common Sense;* and Beattie and Oswald, his immediate disciples, are still more open to the charge.

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* STEWART: but there must be some error here. If the *Inquiry* was not published till 1764, REID could not in 1763 have been offered the chair at Glasgow as a 'testimony of approbation.'

It would carry us to great lengths if we were to examine all the questionable tenets contained in the philosophy of Common Sense. We cannot, however, pass the supposed triumph over Locke, who said that personal identity consists in Consciousness; 'that is,' continues Reid, 'if you are conscious you did such a thing a twelvemonth ago, this consciousness of what is past can signify nothing else but the remembrance that I did it; so Locke's principle must be, that Identity consists in remembrance; and, consequently, a man must lose his personal identity with regard to everything he forgets.' Here Locke is altogether misstated. Consciousness does not resolve itself into any single act of memory, as Reid would here have us believe, nor can personal identity be limited to any one act. I have the consciousness of a certain mental state, wherewith is connected the remembrance of a certain anterior state, which was also connected with an anterior state, and so on. The rope is made up of many strands, and although some of these may be out of sight, not one is broken. I am connected with my boyhood by a regular series of transmitted acts of consciousness. I may have forgotten a thousand things, but I have not forgotten myself: if *one* act performed yesterday is forgotten to-day, *all* are not forgotten; and to remember one, however indistinctly, is sufficient to keep up the continuity of consciousness. Let those who fancy the sentiment of personal identity does not consist in the consciousness of personal identity, show us in what it does consist.

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* 'I despise Philosophy, and renounce its guidance: let my soul dwell with Common Sense.' (*Inquiry*, ch. i. § 3.) Let it be observed, in passing, that by REID's disciples the *Inquiry* is regarded as his best work.

We come now to Reid's great achievement, that upon which he declared his philosophical fame to rest: the refutation of Berkeley and Hume by the refutation of the Ideal theory, which, as we have seen, he radically mistook. This he considered as his contribution to Philosophy; this has been made the monument of his glory. It appears to us, after a long acquaintance with his writings, and a careful perusal of what his critics and admirers have advanced, that his sole merit in this respect is that of having called attention to some abuses of language, and to some examples of metaphors mistaken for facts. How much confusion the word 'idea' has always created need scarcely be alluded to; and any attempt to destroy the acceptation of the word as tantamount to *image*, must be welcomed as salutary. So far let us be grateful to Reid. But whatever abuses may have crept in with the use of the word 'idea,' it seems quite clear that Berkeley and Hume are not to be refuted by refuting the hypothesis of ideas, as Reid and his school suppose; had they even held that theory as he understands it.

Let us, to avoid useless discussion, take it for granted that philosophers did adopt the theory of ideas which Reid combats; let us also grant that Reid has overturned that theory. What advance is made towards a solution of the problem? Not one step. The dilemma into which Hume threw Philosophy remains the same as ever. Since I cannot transcend the sphere of my Consciousness, I can never know things except as they act upon me—as they affect my Consciousness. In other words, a knowledge of an external world is impossible, otherwise than as it appears to my Sense, which transforms and distorts it.

This proposition may be said to form the ground of Scepticism. Now, we ask, how is that proposition affected by overthrowing the ideal theory? What does it signify whether the 'affections of my consciousness' be regarded as 'images' or not? They do not remain less purely *subjective* whichever way we regard them. They are changes *in me.* The main position of Scepticism is precisely this subjectivity of knowledge. Because we cannot transcend Consciousness we can never know things *per se.* Reid acknowledges that we cannot know things *per se*; but he says that we must believe in them, because in what we do know their existence is *suggested.* This is exactly the opinion of Locke; nay more, it is the doctrine of Hume: for he says that we believe in an external world, though we have no good reason for believing it. Sir J. Mackintosh relates that he once observed to Dr. Thomas Brown that he thought Reid and Hume differed more in words than opinions; Brown answered, 'Yes, Reid bawled out we must believe in an outward world; but added, in a whisper, we can give no reason for our belief. Hume cries out we can give no reason for such a notion; and whispers, I own we cannot get rid of it.'

Reid ought to have seen that his refutation of the ideal theory left Idealism and Scepticism untouched: * for either doctrine it matters little *how* the knowledge be acquired, so long as its reach is only subjective. The argument brought forward by Dugald Stewart—that the belief in the existence of an external world is one of the Fundamental Laws of Human Belief—is more philosophical; but when he says that Berkeley's Idealism was owing to the unhappy and unphilosophical attempt of Descartes to prove the existence of the world, he forgets that Idealism was known in the ancient schools long before any one thought of proving the existence of matter. Moreover, although Stewart's formula is not open to the same objections as Reid's, yet it leaves the vital question untouched.

No one doubts that we believe in the existence of an external world. Idealism never questions the fact. The only doubt is, whether that belief be objectively as well as subjectively valid. To say that the belief in objective existence is a Fundamental Law, is simply saying that *we are so constituted* that we are forced to attribute external reality to our sensations. As well say we are so constituted that fire applied to our bodies will give us pain. We *are* so constituted. What then? Does this advance us one step? Not one. We have still to seek some proof of the *laws of our constitution* being the measure of the *laws of other existences*—still to seek how what is true of the subjective must necessarily be true of the objective.

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* In fact MALEBRANCHE's Idealism, which is very similar to BERKELEY's, is founded on a theory of Perception almost identical with REID's.

Thus, granting to Stewart all he claims, we see that he does not attain to the heart of the question; and, strictly speaking, he does not touch Berkeley at all; he only touches Hume. For what answer can it be to Berkeley, to say that our Belief in matter is a Fundamental Law, not to be questioned? Berkeley would reply: 'Exactly; I said as much. I said that men believed their senses, and believed that what they saw was *out* of them. This is the law of human nature: God has so ordained it. But that which men do *not* believe, is the existence of an occult substance, an imaginary world lying underneath all appearances. You do not mean to assert that the belief in this substance is a Fundamental Law? If you do, you must be mad.' Stewart's answer is thus shown to be quite *beside* the mark.

Reid constantly declares that no reason can be given for our belief; it must be referred to an original instinctive principle of our constitution implanted in us for that express purpose. If this be so, we ask upon what pretence does Reid claim the merit of having refuted Idealism and Scepticism by refuting the ideal hypothesis? If *instinct* and not *reason* is to settle the question, then has the *ideal hypothesis* nothing to do with it; if the refutation of the ideal hypothesis sufficed, then has instinct nothing to do with it. 'To talk of Dr. Reid,' said the *Quarterly*, in its review of Stewart's Second Dissertation, 'as if his writings had opposed a barrier to the prevalence of sceptical philosophy, is an evident mistake. Dr. Reid successfully refuted the principles by which Berkeley and Hume endeavoured to establish their conclusions; but the conclusions themselves he himself adopted as the very premisses from which he reasons. The impossibility of proving the existence of a material world from "reason, or experience, or instruction, or habit, or any other principle hitherto known to philosophers," is the argument and the *only* argument by which he endeavours to force upon us his theory of instinctive principles.'

It appears, then, that inasmuch as Reid declares *instinct* to be the *only* principle upon which we can found our belief in an external world, his argument against Berkeley is trebly vicious. First, because the *belief* was never questioned; secondly, because although we must *act* according to our instincts, such a necessity is no proof that our *beliefs are true*; thirdly, because if instinct, and not reason, is to be the arbiter, the attack on the ideal hypothesis is utterly beside the question.

Thus we see that, granting to Reid the glory he claims of having destroyed the ideal hypothesis, he has only destroyed an outpost, fancying it to be the fortress. A few words on his own theory of perception may not be out of place here.

He justly enough declared the ideal hypothesis to be gratuitous. We have no reason for supposing that the mind perceives images of things instead of the things themselves. But he denies that we perceive things *mediately*; he says we perceive them *immediately*. His explanations are contradictory and confused, but he repeats the assertion so often, that there can be no doubt he meant to say we perceive things immediately; the mind stands face to face with the thing, and perceives it immediately, without any medium of ideas, images, eidola, or the like. Reid constantly contradicts himself on the point.

'When I attend,' he says, 'as carefully as I can to what passes in my mind, it appears evident that the *very thing* I saw yesterday, and the fragrance I smelled, are now the *immediate objects* of my mind when I remember it. . . . Upon the strictest attention, memory appears to me to have the things that are past, *and not present ideas*, for its objects.'

This is his position against the ideal hypothesis which assumes that nothing is perceived but what is in the mind which perceives it; that we do not really perceive things which are external, but only certain images and pictures of them imprinted on the mind. The position is untenable. The very thing, the rose, of which he thinks, is not an immediate object at all: *it* is elsewhere. The fragrance cannot even be recalled; that is to say, cannot be *felt* again, but only *thought*. All we can remember is the fact of having been affected by the rose in a certain manner: that affection we call fragrance; we cannot recall the affection. Reid could hardly therefore have meant what his words literally express. Perhaps he meant, that when we think of the rose and the fragrance, the object of which we think is the rose, not an idea of the rose. But what a truism! He says, that 'in memory the *things* that are past, and not present *ideas*, are the objects of the mind.' This is either a needless truism or a falsism. Let us alter the sentence thus—'In memory the *things thought* of are not themselves present to the mind, but the *thoughts* only are present to it.' Reid would not dispute this—could not dispute it: yet it is only a more guarded statement of the ideal hypothesis; it substitutes 'thoughts' for 'ideas.' He was misled by the ambiguity of the word 'object,' which he uses as if meaning simply what the mind is thinking of; and of course the mind thinks of the thing, and not of the idea. But the ideal hypothesis takes 'object' to be that which is immediately present to—face to face—with the mind, viz. an idea, or thought; and of course the mind thinks *by* its thoughts: it may think about the thing, but it is through the medium of thought.

The difference is this:—The Idealist says, that when things affect us, our sensations are what we perceive, and not the things producing those sensations. Reid says, we feel our sensations, but therewith also we perceive the things. The Idealist further says, that when we think of things, the immediate object face to face with the mind is not a thing but an idea (thought). Reid says the object is the very thing: which is either an absurdity, or else does not differ from the ideal hypothesis.

We are quite ready to admit that the pretended separation of thoughts from thinking, and the making thoughts 'objects,' is vicious; and therefore Reid's language is perhaps less objectionable. But we must confess that we see no other advantage he gains over his adversaries. He does not pretend that our sensations are at all *like* their causes; nay, he fancies that he destroys the ideal hypothesis by insisting on the want of resemblance between matter and our sensations. He says, over and over again, that the external world is in no respect like our sensations of it. 'Indeed, no man can conceive any sensation to resemble any known quality of bodies. Nor can any man show, by any good argument, that all our sensations might not have been as they are, though no body, nor quality of body, had ever existed.'* This granted, the question arises, How do you know anything of the external world? Reid answers, 'It is owing to an original instinct implanted in us for that purpose.' Push the question further, drive him into a corner, and bid him tell you what that instinct enables you to know of matter, and he will answer, 'In sensation there is suggested to us a cause of that sensation in the quality of a body capable of producing it.' This is Locke's view.

The great point in Reid's theory is, that with our sensations are joined perceptions. 'The senses have a double province,' he says; 'they furnish us with a variety of sensations, some pleasant, others painful, and others indifferent; at the same time they give us a conception, and an invincible belief of the existence of external objects. This conception and belief, which Nature produces by means of the senses, we call *perception.*'[*] This, upon which so much stress is laid that philosophers are said to have been always in error because they overlooked it, we regard as a remarkable instance of Reid's want of subtlety. Neither Berkeley nor Hume denied the fact of our belief in the externality of the causes of sensations: Berkeley denied that these causes had an occult substratum; Hume denied that any reason could be given for our belief in their externality. What force then has 'perception'? It is nothing more than that 'belief,' according to Reid; though to call perception a belief is, to say the least, somewhat unusual. But grant all he wishes, and you grant that with our sensations there is an accompanying belief in the existence of an external cause of those sensations. Berkeley would answer, 'Very true; but that cause is not unthinking matter.' Hume would answer, 'Very true; but we can give no reason for our belief; we can know nothing of the cause.' Reid can only retort, 'Perception *is* belief:' a retort which has been deemed satisfactory by his school; which really is only an abuse of language; and which moreover has the further disadvantage of being available only as an argument against Hume; for against Berkeley it is powerless. If perception is belief, and we perceive an external world, Hume may be answered when he says we have no grounds for our belief. But Berkeley is not answered. He says that we *do* believe in an external world; but that world is not a world of unthinking matter—it is a world of divine agency. Reid would not pretend that in sensation or perception we can distinguish the nature of the causes which affect us; he constantly tells us that we cannot know *what* those causes are, but only *that* there are causes. As long as the noumenal world is removed from our inspection, so long must Berkeley remain unrefuted by any theory of perception.

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* *Inquiry*, ch. v. § 2.

Reid says, that if we grant Berkeley's premiss—viz. 'we can have no conception of any material thing which is not like some sensation in our minds'—then are the conclusions of Idealism and Scepticism unanswerable. This premiss therefore he disputes. Now attend to his challenge:—'This I would therefore humbly propose, as an *experimentum crucis*, by which the ideal system must stand or fall; and it brings the matter to a short issue: Extension, figure, and motion may, any one or all of them, be taken for the subject of this experiment. Either they are ideas of sensation, or they are not. If any one of them can be shown to be an idea of sensation, or to have the least resemblance to any sensation, I lay my hand upon my mouth and give up all pretence to reconcile reason to common sense in this matter, and must suffer the ideal scepticism to triumph.'* It was not till after repeated perusals that we caught the significance of this passage; and are not quite positive that we have understood it now. To admit it to have any force at all, we must understand 'ideas of sensation' as '*images* of sensation.' Certainly, extension is no copy of any one sensation. But if Reid means to say that the idea of extension is not the result of complex sensations which a body excites in us—if he means to say that the idea of extension is not an abstract idea by which we express a certain property of bodies, a property known to us only through sensation—then must we cease all dispute, and leave him in possession of his discovery.

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[*] *Essays on Intellectual Powers,* ii. ch. xvii.

Reid's theory of perception may be thus stated:—External objects occasion certain sensations in us; with these sensations we perceive the existence of certain qualities capable of producing them: these he distinguishes into primary and secondary. The primary, he says, we perceive *immediately*; the second, *mediately*.

And this is the theory, by which, with the aid of an 'original instinct,' he is supposed to have refuted Idealism. Any one may see that Berkeley might readily have accepted Reid's hypothesis with perfect security for Idealism. The 'unknown causes,' which Reid calls 'qualities,' Berkeley calls 'divine laws.' The difference is merely nominal.

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* *Inquiry*, ch. v. § 7.

Thus much with respect to Idealism. With respect to Hume, the theory is almost as harmless. Hume would say, 'All that is given in sensation is sensation; your "perception" (which you call belief) of qualities amounts to nothing more than a *supposition*—a necessary one, I admit; but I have always said that our belief in external causes of sensation was an *irresistible prejudice*; and my argument is, that we have nothing but the prejudice as a proof—reason, we have none.'

Finally, with respect to Locke, it will in the first place be seen that Reid's solution is neither more nor less than that given by Locke; in the second place, the boasted refutation of the ideal hypothesis is always supposed by Reid's school to be a refutation of Locke's view of the origin of knowledge; and this is a very great mistake. Because Berkeley and Hume pushed Locke's system to conclusions from which he wisely shrank, it has been generally supposed that his account of the origin of our knowledge is indissolubly bound up with the ideal hypothesis, by it to stand or fall. This probably is the meaning of the vulgar error that Locke's view of knowledge leads to atheism. It led to Hume.

In disproof of Reid's supposition we answer, firstly, Idealism is not indissolubly bound up with the ideal hypothesis; and that Berkeley did not adopt that hypothesis; secondly, Locke's system is altogether independent of the hypothesis, and in his Review of the doctrines of Malebranche he very distinctly and emphatically denies it. The force of this observation will better be appreciated when it is remembered that although Locke's language is notoriously unguarded and wavering, all his reasonings are founded on the use of the word 'ideas' as synonymous with 'notions' or 'thoughts.' *

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* Since the first edition of this work, Sir W. Hamilton has published an edition of Reid, illustrated and enriched by notes and dissertations of remarkable erudition and acuteness. Respecting the interpretation Sir William gives to Reid's doctrines, I will only say that he has shown what a subtle mind can *read into* the philosophy of common sense; but he has not in the least produced the conviction

Let us now pass to the psychological investigations of Reid and his followers. The favourite phrases with which Stewart so complacently describes them as 'inductive metaphysics' and 'experimental philosophy of the mind,' are the homage paid to the Objective Method by one who was too cultivated not to be aware of the triumphs of that Method; but we must not misinterpret the homage. There is very little Induction, and not a glimpse of Experiment, in all the writings of this school. There is much excellent analysis and sagacious remark. There is a liberal and philosophic spirit animating the pages: where no less than in the lectures of Thomas Brown and in the *Analysis* of James Mill, we find many valuable contributions to the science of Psychology. But, in my opinion, not one of them had a due conception of the true province of Psychology, nor of the Methods by which such a science could be established. Brown came nearest to such a conception. Not one of them saw that the disputes which had so fruitlessly been carried on could only be settled by the substitution of a new Method of inquiry, which in all other sciences had alone been found fruitful. Not one of them saw the necessity of thoroughly understanding the organism if he would understand the functions.

Thus Reid devotes a chapter to expounding his views of the proper means of knowing the operations of the mind.* 'The chief and proper source of this branch of knowledge is accurate reflection upon the operations of our own minds.' For this it is necessary to attend to the structure of language and the course of human actions and conduct. 'The actions of men are effects; their sentiments, their passions, and their affections are the causes of those effects; and we may in many cases form a judgment of the cause from the effect.' After such a statement of the Method we need not marvel at the futile results. He begins his account of the Senses with

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in me of REID's having always meant what the editor supposed him to have meant.

* *Essays*, i. ch. v.

an admission which rightly interpreted should have forced him to adopt the physiological means of investigation. He lays it down as a first truth that we can perceive no external object except through the bodily organs. For this 'we can give no reason but that such is the Will of our Maker. No man can show it to be impossible to the Supreme Being to have given us the power of perceiving external objects without such organs.' Consequently we are not to suppose these organs in their own nature necessary to perception, but only that it is the will of God that our perception is limited by our organs. On this passage Hamilton has the following absurd note: 'However astonishing, it is now proved beyond all rational doubt, that, in certain abnormal states of the nervous organism, perceptions are possible through other than the ordinary channels of the senses.' Psychology, in such hands, was in a pitiable condition. Here Hamilton obviously refers either to clairvoyance, or hallucination. These are the only abnormal states in which the ordinary channels can be considered as set aside. If he refers to clairvoyance, what are we to think of his science? If to hallucination, what are we to think of his Psychology? because, granting that the images of an excited brain are justifiably styled perceptions, is it not clear that these images are reproductions of those originally stimulated by the 'ordinary channels of sense'? The note can have no meaning unless to imply that the mind has other channels than the organs of sense; and in this meaning it is preposterous.

Although Reid insists upon the material conditions of mental phenomena, he also insists on our not considering those conditions as the causes. Some philosophers, he admits, imagine that man is 'so curiously organised that the impressions of external objects produce in him sensation, perception, remembrance, and all other operations we are conscious of. *This foolish opinion* could only take its rise from observing the constant connection which the Author of Nature hath established between certain impressions made upon our senses and our perceptions of the objects by which the impression is made; *from which they weakly inferred* that those impressions were the proper and efficient causes of the corresponding perception.' * In other sciences an inference from *constant* connection is accepted as valid; but in Psychology it appears we are to reject it, and accept instead the valuable information that 'we perceive, because God has given us the power of perceiving, and not because we have impressions from objects'!

It is unnecessary to pursue the criticism of a system which has long since ceased to have any adherents. The Psychology of the Scotch School, though containing, as I intimated before, much available matter for students, is entirely defunct as a doctrine. It failed, as it deserved to fail. It had neither a clear aim nor a right Method. It added verbal analysis to verbal analysis, and metaphysical explanation to metaphysical explanation; meanwile physiologists and a few psychologists were 'taking the clock to pieces'—as we shall see hereafter.

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* *Essays*, ii. ch. iv.

EIGHTH EPOCH.

Psychology finally recognised as a branch of Biology.
The phrenological hypothesis.

CHAPTER I.

GALL.

§ I. Life of Gall.

FRANCIS JOSEPH GALL was born at Tiefenbrunn, in Suabia, on the 9th of March, 1757. In the preface to his great work, *Anatomie et Physiologie du Système nerveux*, 1810, he narrates how as a boy he was struck with the differences of character and talents displayed by members of the same family, and how he observed certain external peculiarities of the head to correspond with these differences. Finding no clue given in the works of metaphysicians, he resumed his observations of nature. The physician of a lunatic asylum at Vienna allowed him frequent occasions of noticing the coincidence of peculiar monomanias with peculiar configurations of the skull. The prisons and courts of justice furnished him with abundant material. Whenever he heard of a man remarkable either for good or evil, he made his head a study. He extended his observation to animals; and finally sought confirmation in anatomy. The exterior of the skull he found, as a general rule, to correspond with the form of the brain.

After twenty years of observation, dissection, theorising, and arguing, he delivered his first course of lectures in

Vienna. This was in 1796. The novelty of his views excited a great sensation; one party fanatically opposing them, another almost as fanatically espousing them. Ridicule was not sparing. The new system lent itself to ridicule, and angry opponents were anxious, as opponents usually are, to show that what made them angry was utterly farcical. In 1800 Gall gained his best disciple, Spurzheim. Hitherto Gall had been aided only by a young anatomist, named Niklas, to whom he taught the new method of dissecting the brain;* Spurzheim's mastery of anatomical manipulation, combined with his power of generalisation and of popular exposition, came as welcome aids in the gigantic task of establishing the new doctrine on a scientific basis.

In 1802 M. Charles Villers, the translator of Kant, published his *Lettre à Georges Cuvier sur une Nouvelle Théorie du Cerveau par le docteur Gall.* I have not been able to procure this Letter, but it is in many points interesting to the historian of Phrenology, because it expounds the doctrine as it was *then* conceived, and describes the localisation of the organs then fixed on by Gall. A plate represents the skull, marked by Gall himself, with the four-and-twenty organs, which at that period comprised the 'original faculties' of the mind. Among these twenty-four, there are four subsequently discarded altogether: Vital Force—Susceptibility—Penetration (independent of that which characterises the metaphysical faculty)—and Generosity (independent of benevolence). Not only are these four astonishing organs marked by Gall as representing original faculties, but the twenty organs which were afterwards retained by him are *differently* localised; so that, according to M. Lélut, from whom I borrow these details, 'of those twenty organs there is scarcely one which occupies the place Gall finally assigned to it.'†

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* GALL pays his tribute to NIKLAS in the first edition of the *Anat. et Phys. du Système nerveux*, i. préface xv. In the second edition this tribute is omitted; not very creditably.

† LÉLUT: *Rejet de l'Organologie phrénologique*, 1843, p. 29.

Phrenologists should give prominence to this fact. They are bound not to pass it over. In every way it is important in the history of the doctrine. It may perhaps be satisfactorily explained; but until it is explained, it must tell against them; and for the very reason which they incessantly advance as their claim to consideration, namely, that the several organs were established by *observation*, not by theory.* For if the doctrine had been established by a mingling of hypothesis and observation, nothing would be more likely than that the first sketch of it would be immature in conception and uncertain in details; whereas, if the doctrine grew up slowly from a gradual accumulation of rigorously verified facts, these facts would remain constant through all the tentative changes of doctrine. Gall had been twenty years collecting facts of correspondence between external configuration and peculiarities of character. He had controlled these observations by repeated verifications. Prisons, lunatic asylums, busts, portraits, remarkable men, even animals, had furnished him with facts. Unless these facts really deserve all the credit which is demanded for them, Phrenology has the ground cut from under it; and if we are to give them our confidence, upon what ground can we relinquish it in favour of subsequent facts which deny all that has been said before? If Gall could be deceived after twenty years of observation of facts which, according to his statement, are very easily observed, because very obvious in their characters, why may he not have been equally deceived in subsequent observations? If one collection of facts forced him to assign the organ of poetry to a particular spot (on the skull marked by him for M. Villers), how came another collection of facts to displace poetry, and substitute benevolence on that spot? Are the manifestations of poetry and benevolence so closely allied as to mislead the observer?

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* 'On voit par la marche de ces recherches que le premier pas fut fait par la découverte de quelques organes; que ce n'est que graduellement que nous avons fait parler les faits pour en déduire les principes généraux, et que c'est subséquemment et à la fin que nous avons appris à connaître la structure du cerveau.'—GALL: *Anat. et Phys.* i. préface xviii.

Spurzheim's assistance came at the right moment to rectify many of the hazardous psychological statements, and to marshal the facts in better order. Together Gall and he made a tour through Germany and Switzerland, diffusing the knowledge of their doctrine, and everywhere collecting fresh facts. On the 30th October, 1806, they entered Paris. In 1808 they presented to the Institute their Mémoire on the *Anatomy and Physiology of the Nervous System in general and of the Brain in particular*; and in 1810 appeared the first volume of their great work, under the same title; which work was remodelled by Gall in 1823, and published in six volumes, octavo, under the title of *Fonctions du Cerveau.*

In 1813 Gall and Spurzheim quarrelled and separated. Spurzheim came to England, Gall remained in Paris, where he died on the 22nd of August, 1828. At the post-mortem examination, his skull was found to be of at least twice the usual thickness, a fact which has been the source of abundant witticisms—for the most part feeble. A small tumour was also found in his cerebellum: 'a fact of some interest, from that being the portion of the brain in which he had placed the organ of amativeness, a propensity which had always been very strongly marked in him.' * I know not in what sense the writer just quoted thinks the fact so remarkable. We are not accustomed to find great poets with tumours in the organ of 'imagination;' great artists with tumours in the perceptive region; great philanthropists with tumours on the frontal arch; great rebels with tumours behind their ears.†

§ II. GALL'S CONTRIBUTIONS TO SCIENCE.

The day for ridiculing Gall has gone by. Every impartial and instructed thinker, whether accepting or rejecting

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* *The English Cyclopædia*, vol. iii. *Art.* Gall.

† To anticipate the reply that the existence of disease in the organ would provoke unusual activity of the organ, it is only necessary to state that GALL's 'propensity' is not said to have been called into unusual activity shortly before his death, but to have always been very active. Had there been a causal con-

Phrenology, is aware of the immense services rendered to Physiology and Psychology, both by Gall's valuable discoveries, and by his bold, though questionable, hypothesis. He revolutionised these studies by his method of dissecting the brain, and by his assignment of definite functions to definite organs. To verify or refute his hypotheses, vast researches were undertaken; the nervous system of animals was explored with new and passionate zeal; and now there is no physiologist who openly denies that mental phenomena are directly connected with nervous structure; while even metaphysicians are beginning to study the mechanism of the Senses, and the general laws of nervous action. The time has arrived in which it seems almost as absurd to theorise on mental phenomena in defiance of physiological laws, as it would be to adopt Stahl's advice, and consider anatomical and chemical researches futile in the study of Medicine. We owe this mainly to the influence of Gall. He first brought into requisite prominence the principle of the necessary relation, in mental as in vital phenomena, between organ and function. Others had proclaimed the principle incidentally; he made it paramount by constant illustration, by showing it in detail, by teaching that every variation in the organ must necessarily bring about a corresponding variation in the function. He did not say mind was the *product* of organisation: 'nous ne confondons pas les conditions avec les causes efficientes;' all he asserted was the correspondence between the state of the organ and its manifestations.* This was at once to call the attention of Europe to the marvellous apparatus of organs, which had previously been so little studied, except from a purely anatomical point of view, that no one, until Sömmerring (who was Gall's

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nection between the disease and the activity, increase of the activity would have followed the rapid progress of the disease.

* So also SPURZHEIM says: 'Both Dr. Gall and I have always declared that we merely observe the affective and intellectual manifestations, and the organic conditions under which they take place; and that in using the word organs we only mean the organic parts by means of which the faculties of the mind become apparent, but not that these constitute the mind.'—*Phrenology*, p. 16.

contemporary), had observed the relation between size of the brain and intellectual power, as a tolerably constant fact in the animal kingdom. This one detail is sufficient to make every reader suspect the chaotic condition of physiological Psychology when Gall appeared.

Nor has Gall's influence been less remarkable in the purely psychological direction. People in general are little aware how that influence is diffused, even through the writings of the opponents of Phrenology, and has percolated down to the most ordinary intelligences. Gall may be said to have definitely settled the dispute between the partisans of Innate Ideas and the partisans of Sensationalism, by establishing the connate tendencies, both affective and intellectual, which belong to the organic structure of man. Two psychological facts, familiar from all time to the ordinary understanding, but shrouded from all time in the perplexities of philosophy, he made the basis of his doctrine. The first of these facts is, that all the fundamental tendencies are connate, and can no more be created by precept and education than they can be abolished by denunciation and punishment. The second fact is, that man's various faculties are essentially distinct and independent, although intimately connected with each other; whence he concluded that the Mind consists of a plurality of functions. A plurality of organs became the necessary corollary of this proposition, as soon as the relation between organ and function was steadily conceived.

These two propositions have entered into the body of most psychological doctrines, although the corollary from the second is still vehemently disputed by many. No man of any intellectual eminence would now repeat Johnson's celebrated assertion of the poetic faculty being simply intellectual activity in a special direction, whereby Newton might have written *Othello*, and Shakspeare the *Principia*, had either of these great men set themselves the task. 'Sir, a man can walk as far east as he can walk west,' was thought a conclusive illustration; which indeed it was, when the 'unity' of the faculties found no contradiction; no one would now accept it as more than a fallacious analogy.

Another conception systematised by Gall has also passed into general acceptance, namely, the preeminence of the affective faculties over the intellectual; also the subdivision of the affective faculties into propensities and sentiments, and of the intellectual faculties into perceptive and reflective: thus marking the progress in development from the individual to the social, from the sensuous to the intellectual, which constitutes the great progress of civilisation, in the triumph of sociality over animality.

Not only has Gall the immense merit of having decisively settled wavering conceptions respecting the Brain, and defined it as the instrument of the intellectual and moral faculties; but he has also the merit of having thoroughly grasped the significance of the Comparative Method. Conceiving the Brain as an apparatus of organs, and the mental faculties as functions of those organs, he applied this conception to the whole animal kingdom, and derived from observation of animals confirmations of his observation of man.

It may seem to the reader familiar with the current doctrines of physiologists, and unfamiliar with the history of Physiology, that this step was easy to take. Such a conclusion would be most unjust. So far from easy was the step, that illustrious anatomists before Gall had been unable to take it; and illustrious metaphysicians since Gall have been unable to follow it. Although, from the days of Hippocrates downwards, the Brain had been more or less clearly recognised, as the seat of the intellectual faculties, there was considerable hesitation as to the seat of the passions and propensities. Even Cabanis and Bichât assigned these to the viscera. Moreover those who held that the Brain was the seat of the intellect, either held that it was merely a local habitation, not a definite organ of which intellect was the function; or else they held that it was only one organ, and had very vague ideas of its functions;

they had no conception of the Brain as an apparatus of organs, no conception of each faculty having its special organ.

Thus the essential part of Gall's conception was novel; and the part that was not novel, was opportune. Even Flourens, the uncompromising antagonist of Phrenology, admits that Gall decided a wavering opinion: 'La proposition que le cerveau est le siége exclusif de l'âme n'est donc pas neuve, n'est donc pas de Gall; elle était dans la science avant qu'eût paru sa doctrine. Le mérite de Gall, et ceci même n'est pas un médiocre mérite, est d'en avoir mieux compris qu'aucun de ceux qui l'avaient précédé toute l'importance, et de s'être dévoué à la démontrer. Elle était dans la science avant Gall; on peut dire que depuis Gall elle y règne.'* Those therefore who reject the hypothesis which is peculiar to Gall, namely the assignment of each faculty to a distinct central organ (an hypothesis only vaguely conceived by Prochaska) † must admit the importance of his arguments establishing the organic dependence of mind and the brain. That this was needed may be further seen in the reluctance which may still be observed on the part of metaphysicians to acknowledge it. Thus Sir W. Hamilton boldly asserts that '*no assistance* is afforded to Mental Philosophy by the examination of the Nervous System, and that the doctrine or doctrines which found *upon the supposed parallelism of brain and mind*, are, as far as observation extends, *wholly* groundless.' ‡ When such a man, not unacquainted with Physiology, could teach his pupils this independence of mental phenomena, we need not wonder that Jeffrey, who was wholly ignorant of science, could in his attack on Phrenology in the 'Edinburgh Review,' take up a similar position: 'The truth, we do not scruple to say it, is, that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs except in the perception of material objects, or in the spontaneous movements of the body which it inhabits; and that this whole science rests upon a postulate or assumption for which there is neither any show of evidence, nor any show of reasoning.'* It is almost cruel to cite two such passages from two such writers; but the citations show what need there was of Gall's labours.

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* FLOURENS: *De la Phrénologie*, 1863, p. 20.

† PROCHASKA has a brief section, entitled, 'Do each of the divisions of the intellect occupy a separate portion of the brain?' This is merely a question raised without any attempt to answer it. The conclusion will show how vague were Prochaska's views: 'It is by no means improbable that each division of the intellect has its allotted organ in the brain, so that there is one for the perceptions, another for the understanding, probably also others for the will and imagination and memory.' *Dissertation on the Nervous System*, translated by LAYCOCK for the *Ray Society*, p. 447.

‡ HAMILTON, *Lectures on Metaphysics*, I. p. 261. At p. 404 he so far qualifies this absurd remark as to admit that 'the mind in its lower energies and affections

A slight acquaintance with the history of Anatomy also shows what a need there was for the new method of dissecting the brain originated by Gall. One sentence from his antagonist Flourens will suffice here. 'Je n'oublierai jamais l'impression que j'éprouvai la première fois que je vis Gall disséquer un cerveau. Il me semblait que je n'avais pas encore vu cet organe.'† This is not the place to expound or criticise Gall's anatomy. I only wish to call attention to his great services in having originated a new method of investigation. His own results, here and elsewhere, must be accepted as preliminary indications only, not as discoveries.

The same remark applies to the fertile suggestions by which he endeavoured to connect Psychology with Biology. He had, it must be confessed, but very imperfect ideas on both these subjects; nevertheless he had a comprehensive and eminently scientific point of view. So long as he keeps at the height of this point of view and takes a panoramic

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is immediately dependent on the condition of the nervous system, and that in general the development of the brain in the different species of animals [not then of men?] is correspondent to their intelligence.'

* Quoted by George Combe: *Phrenology Applied to Painting and Sculpture*, 1855, p. xiii.

† Flourens: *op. cit.* p. 180.

survey of the field, he is admirable. When he descends to details he stumbles.

He clearly saw and clearly expressed the truth that the greatest obstacle in the way of psychological research was the vicious practice of isolating human nature from the animal series, and of endeavouring to release it from the laws which govern animal life. We may, he says (but this is a mistake), without inconvenience neglect the relations of man to the inorganic world; but it is impossible to avoid endless confusion, unless we distinguish the functions man has in common with plants, and the functions he has in common with animals: the latter being obviously the functions of the nervous system.* Finding that animals have a nervous system which in all essentials is identical with that of man, and finding also that animals have instincts, propensities, and intelligence similar, if not the same as those of man, he justly asks whether, in examining the nature and origin of human faculties, we ought not to take those of animals into account? 'L'homme, tant qu'il est animal, serait-il un être isolé du reste de la nature vivante? serait-il gouverné par des lois organiques opposées à celles qui président aux qualités et aux facultés du cheval, du chien, du singe?' † The conception here ridiculed was firmly held by metaphysicians, who amused themselves with writing long treatises on the mind as an isolated entity, detached from all physical laws, 'exerçant ses fonctions par elle-même, se servant du corps tout au plus comme d'un moyen de communication entre elle et le monde.'

His argumentation is victorious along the whole line. If, he says, our moral and intellectual faculties are independent of organic conditions, it is needless to trouble ourselves about the brain and nervous system. Man is excluded from the field of observation, except as a physical being. 'If, on the other hand, I can demonstrate *an essential relation* between the exercise of his moral and intellectual forces and his organisation, it will follow that the search after the organic conditions is the most important object that can occupy the physiologist; and if I can demonstrate that these organic conditions are the brain and its parts, we shall see the possibility of a doctrine of the cerebral functions, a doctrine which discloses the organs employed in the manifestation of all our propensities, all our sentiments, and all our faculties.' *

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* GALL: *Fonctions du Cerveau*, i. 22 *sq.*

† *Ibid.* p. 48.

The task is delicate, and difficult. Besides its intrinsic difficulty, there is the obscuration of metaphysical prejudices. 'A tout moment, les métaphysiciens viennent ralentir les progrès des naturalistes ; en général c'est aux métaphysiciens qu'il faut attribuer l'ignorance où l'on est encore sur la véritable nature de l'homme.'† These doctors were employed seeking 'the seat of the soul,' which was now supposed to be in one point, now in another. 'Au lieu de rechercher simplement des phénomènes, on se bornait, comme c'est encore l'usage, à des subtilités philosophiques ; on s'épuisait en spéculations sur la nature intime de l'âme.' The union of the soul with the body, and the possibility of an intermediate action ; the question whether sensations and ideas are the results of impressions on the brain, and whether they left traces, copies, of themselves there ; such were the favourite topics of debate. They were all set aside when the study of the cerebral functions began.

Gall not only studied the brain in man, but studied its evolution in the animal series, and with it the evolution of instincts, propensities, faculties. He knew that the dreaded reproach of Materialism would be thrown on such a method ; but as he rejected Materialism, he was not to be alarmed by a clamour of misrepresentation. 'Quand je dis que l'exercice de nos facultés dépend des conditions matérielles, je n'entends pas que nos facultés soient un *produit* de l'organisation ; ce serait confondre les conditions avec les causes efficientes.' ‡ In a separate section devoted to this accusation of Materialism, he says, 'I have always declared that I leave unsought the nature of the soul as of the body, and that I never attempt to explain the essence of either of their faculties. *I confine myself to phenomena.*'* The phenomena presented to observation, both in animals and man, he tried to connect with their material conditions; and the attempt was eminently philosophical, though, as we shall see, its results were not very successful.

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* GALL : *Fonctions du Cerveau*, p. 189. † *Op. cit.* ii. 4. ‡ *Op. cit.* i. 189.

§ III. Gall's Method.

In the foregoing enumeration of his contributions to a real Psychology, the chief elements of Gall's Method have been indicated. What we have to do here is to bring these elements together, and mark with more precision the value to be attached to his conception of them. The point of view is important. In his vision of Psychology as a branch of Biology, subject therefore to all biological laws, and to be pursued on biological methods, he may be said to have given the science its basis.

What were the means of investigation which Biology opened to him? They were zoological observations interpreted by anatomical, physiological, and pathological indications. The phenomena presented by animals and men were compared and classified; each elementary faculty was assigned to some distinct organ, indicated as the organ of the faculty by its constant presence when the phenomena were present, by its absence in the absence of the phenomena, and by its lesion in irregularities of the phenomena.

There was another and important instrument of research, which Gall disregarded, namely, subjective analysis, an instrument so necessary that some psychologists, otherwise quite alive to the importance of biological investigation, maintain that Psychology should be erected into a separate science, mainly directed by this analysis. I shall presently have to point out the consequences of Gall's disregard of this instrument. It is the only serious defect in his general conception of Method.

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* Gall: *Fonctions du Cerveau*, p. 228 *sq.* The whole section is worth consulting.

The most superficial glance at this Method discovers its novelty, its importance, and its immense sweep. Its novelty consisted in its precision. What before had been vaguely seen to be useful means of investigation, and had been applied with more or less success, he saw to be indispensable, and to need systematic co-ordination. The relations of the physical and moral, the influence of the body on the mind, and of the mind on the body, had been vaguely recognised; and by Cabanis an attempt had been made to systematise them. The general relations also of the Nervous System and the Mental Functions had been recognised. But no one had attempted a precise demonstration. No one had attempted to unveil the mysterious mechanism of physical and moral phenomena. In the experience of physicians various striking facts were recorded, showing how the influence of an idea determined a physical result analogous to that determined by a physical agent. The belief of having taken a purgative was known to act on susceptible patients, although the pill actually administered was made of bread; the terror at having taken an emetic by mistake, was known to produce violent vomitings, when no emetic stronger than pure water had been really taken; the pain of an exposed nerve in a carious tooth was known to disappear directly the patient entered the dentist's room. Such cases, and they are numberless, were quietly disposed of by attributing them to Imagination. They might as well have been attributed to the Differential Calculus.

Note how easily a phrase is made to do duty for a definite conception. Through what structural conditions Imagination was to act upon the bowels or on the teeth, that is to say, what parts of the physical organism were set in action by the image, no one thought of asking. Imagination was autocratic, freed from all conditions. Those naïve metaphysiologists who conceived Imagination as a perfectly free agent unencumbered by material conditions, and capable of acting anywhere because it was an inhabitant of Nowhere (being spiritual it could not have a locality), felt no need of the discovery of a particular mechanism for the production of results. But physiologists who sought a scientific explanation, and who believed that each action of the nervous system took place under definite conditions, and through a definite mechanism, were called upon not to rest contented with a meaningless phrase, but to show what was the pathway of Imagination acting on the teeth to drive away the pain, and on the bowels to change bread-pills into purgatives, innocent drinks into emetics.

It is true that Gall made no attempt to disclose this mechanism of the moral and physical, nor was his physiological knowledge precise enough to warrant the attempt. But he did try to substitute definite ideas of the mental mechanism in place of the vague generalities current among philosophers; he was not content with assigning mental faculties to the nervous system in general, he tried to show what part of the nervous system was involved in each of the distinct faculties. The attempt proved a failure; but it was one of those germinal conceptions which enrich science. The hypothesis did not withstand Verification; but it was an illuminating hypothesis, because while colligating known facts and instigating research, it was one to which the process of verification could be applied. Comte compares the hypothesis of Gall with the hypothesis of Descartes. Although the 'vortices' were rejected by science, they served a preliminary purpose of great utility. 'En effet, par les tourbillons, Descartes arrachait la constitution du monde aux agents surnaturels, à la métaphysique, aux entités; posant le véritable problème, il le resolvait hypothétiquement;'* in like manner Gall rescued the problem of mental functions from Metaphysics, and made it one of Biology. Still more illustrative is the comparison Comte makes between Gall and

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* LITTRÉ: *Auguste Comte et la Philos. positive*, 1863, p. 542.

Broussais. At a time when fevers were considered as essential maladies, morbid entities whose course had nothing to do with the conditions of the living body, Broussais, by an intuition of genius, saw that Pathology must be a particular case of Physiology, that diseases were *abnormal* conditions of the *normal* functions. He therefore propounded the hypothesis that all fevers were nothing but various forms of inflammation of the intestinal canal. The hypothesis proved false; science has rejected it; but the principle was true, and science has consecrated it.

The hypothesis of Gall had its basis in three propositions: 1, that the mental faculties are activities of the cerebral organs; 2, that Psychology is a branch of Biology; and 3, that any attempt to separate the mental from the physical organisation, as two independent factors, must lead to error. It had been the practice to separate mental from vital phenomena, and study them apart. Gall obeyed the Canon of Restitution (*Prolegomena,* § 54), which prescribes the necessity of completing psychological analysis by physiological analysis. The hypothesis he erected on this basis was that the moral and intellectual faculties are twenty-seven in number, each of which has for its organ a distinct portion of the convolutions of the cerebrum and cerebellum: this aspect of the hypothesis is Phrenology. Inasmuch as the external configuration of the skull is moulded on the configuration of the Brain, the organs are definitely indicated both as to position and size, by the topography of the skull: this is Cranioscopy.

Since we are here considering only the Method, it would disturb the exposition if we paused to estimate the truth of an hypothesis which will challenge attention hereafter. Let me only indicate the immense difficulty and sweep of the investigations which the hypothesis demanded. That will disclose how precipitate and unwise Gall's followers have been in not at once recognising the essentially tentative nature of an hypothesis which they have blindly accepted as a final theory. It was natural that Gall himself should have had no doubts, and should have believed that he was in possession of all the knowledge essential to his scheme. But his successors have displayed even greater confidence; which only proves how ill-instructed they have been in Biology, and how little penetrated with the true spirit of scientific scepticism.

Phrenology may be regarded as a Physiology of the Brain; or as an Art of Reading Character by means of the skull, i.e. Cranioscopy. Gall, I am aware, conceived that his doctrine was both; and, indeed, *if* his Physiology be true, the indications of his Cranioscopy must likewise be accepted; although it is quite conceivable that his Phrenology may be a mass of errors, and yet his Cranioscopy have empirical truth. I do not say that Cranioscopy is true; neither do I say that Physiognomy or Cheironomy is true; but we may suppose observation of the coincidence between external form and mental disposition to reach a certain empirical accuracy sufficient for the establishment of an Art, quite independent of the truth or error of the cerebral Physiology which accompanies it. Thus also Lavater's Physiognomy might have been true, although his Physiology was absurd.

Phrenology may thus be detached from Cranioscopy, and be estimated apart, each having their separate grounds of evidence, though they are mutually illuminating. On Cranioscopy nothing need be said at present, except that Gall's method of research was distinguished by its comprehensiveness and sagacity. Both in the choice of facts, and in the comparative sweep of his collection, he showed the skill and patience of an investigator. I do not say that he was not biassed by his hypothesis. I do not pretend that his facts were always accurately interpreted, or that contradictory evidence was impartially weighed. Gall was human. But making every deduction, we must still admit that so vast an array of facts, zoological, pathological, and psychological, had never before been collected by any one inquirer into this abstruse subject. And, moreover, they were statements for the most part admitting of verification.

With Phrenology the case is otherwise. It claims to be a

Physiology of the Brain; and the very Method, which it is the glory of Gall to have introduced, insists on so vast and comprehensive an investigation of biological facts and laws, that every hypothesis must be regarded simply as an hypothesis, a tentative effort to range the facts in some available order, until the laws of nervous action have been positively ascertained, and the function of each organ placed beyond dispute. Gall conceived a luminous hypothesis. This had to be verified. The new physiology of the brain had to be tested by Anatomy, Physiology, Pathology, Zoology. What was the result? Those who have read these pages aright will see that I throw no discredit on Gall's genius in affirming that his physiology of the brain is altogether irreconcilable with the discoveries of modern science, and that, as far as we can be said to know anything of the nervous system, his positions are one and all erroneous. Of this more anon.

Gall was precipitate. He was forced to be so. His hypothesis could not await the tardy disclosures of science; it was a powerful stimulant to science, and meanwhile it colligated the facts then known. Gall was the Kepler of Psychology. His followers proclaim him a Newton. It is probably in consequence of this confidence in their master that while, on the one hand, we find every phrenologist since Gall, Spurzheim, and Vimont, occupied entirely with Cranioscopy, and many even speaking with disdain of anatomists and physiologists; on the other hand, we find them anxious to bring forward physiological and pathological evidence, whenever that evidence favours their views; and we hear them confidently assert that Phrenology is the only true Physiology of the nervous system. This latter assertion I am quite willing to echo, if the terms be somewhat modified, and the phrase run thus:—'Phrenology aspires to be the true Physiology of the nervous system; when that Physiology is complete, Phrenology will be complete.' But for the present we find Physiology confessing its incompleteness—confessing itself in its infancy; whereas Phrenology claims to be complete, equipped, full-statured. Rightly considered, that very claim is a condemnation of Phrenology, as at present understood. The pretension of being a perfect or nearly perfect system, surely implies a profound ignorance of the subject, an entire misconception of the complexity of the problem it pretends to have solved? At a time when Science finds it difficult to solve the problem of three gravitating bodies, phrenologists pretend to find no difficulty in calculating the result of forces so complex as those which constitute character; at a time when the nervous system is confessed, by all who have studied it, to be extremely ill-understood, the mental functions of that system are supposed to be established; at a time when Physiology is so rapidly advancing that every decade renders most books antiquated, a Psychology professedly founded on that advancing science remains immovable!

Gall was on the right path when he entitled his first great work *Anatomy and Physiology of the Nervous System.*[*] His successors have quitted that path. In spite of his emphatic declarations, when he was engaged in his exposition of the anatomy and physiology of the nervous system,[†] declarations of the necessity to make the study of organ and function go hand in hand, so that he would only have his labours regarded 'as the basis of an essay towards a more perfect work;' in spite, we say, of every philosophical consideration, his successors have neglected Physiology for Cranioscopy; not one of them has made or attempted to make any discovery or extension of discovery in the direction Gall so successfully opened; and the result of this neglect has been twofold,—first, that since Gall and Spurzheim, Phrenology has not taken a single step; secondly, that all the eminent physiologists of Europe who have devoted themselves to the study of the nervous system, unanimously reject a theory which does not keep pace with the advance of science. It is very easy for phrenologists to disregard the unanimous opposition of physiologists, and to place this opposition to the account of prejudice, or the 'not having sufficiently studied Phrenology;' but an impartial on-looker sees clearly enough that, making every allowance for prejudice, the opposition rests mainly on the discrepancy between the facts stated by phrenologists and the facts which Science has hitherto registered. Had phrenologists kept themselves acquainted with what was gradually being discovered by physiologists, they would have seen that something more than prejudice must be at work when all the eminent neurologists, such as Serres, Flourens, Majendie, Leuret, Longet, Lélut, Lafargue, Baillarger, Müller, Valentin, Gratiolet, Vulpian, Wagner, and Schiff, declare against Phrenology; although every one of these is ready to admit the importance of Gall's method of dissection, ready to incorporate whatever results Gall arrived at, which can be in any way confirmed. Authorities are not reasons; but the unanimity on this point has a reason. I am indisposed to estimate a doctrine by the array of names on its side; but I cannot overlook the fact that here physiologists belonging to very opposite schools of thought all agree in rejecting the facts, no less than the doctrines, advanced by Gall; and this unanimity is the more striking because there is scarcely a single man of eminence on the other side. I do not blame phrenologists for having rendered no assistance to Physiology by their own labours; but I am forced to point out the consequences of their having neglected to follow the path commenced by Gall, and having deviated into that of simple Cranioscopy. The neglect of which they complain, is entirely owing to their presenting a rude sketch as a perfect science, and to their keeping behind the science of their day, instead of on a level with it. Impatient of contradiction, they shut their eyes to difficulties; unable to accommodate their principles to the principles of Physiology, they contemptuously dismiss objections as 'merely theoretical,' and fall back upon their 'well-established facts.'

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[*] 'Quiconque,' he says, 'est convaincu que la structure des parties du cerveau a un rapport nécessaire et immédiat avec leurs fonctions, trouvera qu'il est naturel de réunir ces deux objets l'un à l'autre, en les considérant et en les traitant comme un seul et même corps de doctrine.'—*Anat. et Phys.* préf. xxv.

[†] Compare his *Anat. du Syst. nerveux*, i. 95 and 271.

This point must not be shirked. Gall's merit is that of having reduced Psychology to a branch of Biology. He must not be at once credited with a revolution, and exculpated from the results. Not only did he take his stand on Phrenology, but emphatically declared that his cranial researches were necessary in order to arrive, by means of observation, at a knowledge of the functions of the various parts of the brain.* 'Mais on affecte d'ignorer la physiologie,' he complains, 'et de ne connaître nous et nos travaux que sous le point de vue de *cranioscopie* de *cranioscopes*.' He was justly wroth with adversaries who tried to divert public attention from his real researches by sarcasms on Cranioscopy. And Broussais, when he became a disciple, repudiated even the name of Psychology. 'Non, messieurs, la phrénologie n'est point un système de psychologie: nous ne devons pas admettre dans cette enceinte, des qualifications qui suggèrent des théories hypothétiques. La phrénologie est la physiologie du cerveau; voilà quelle doit être la véritable acception de ce mot.'†

It is true—and this is some justification of Gall's successors—that inasmuch as Cranioscopy was really the starting-point, and means of verification, of his hypothesis, he did lay great stress on it; affirming that to it we owed 'une physiologie et par conséquent la partie la plus essentielle de la pathologie du cerveau.' And he adds this naïve and astounding proposition: 'There is no other means possible whereby to discover the functions of the cerebral organs; all the others serve at most to confirm what has been discovered by inspection of skulls.'‡

This remark discloses what every biologist who reads Gall will have seen at once, that Gall had extremely imperfect views of what constituted Physiology, and how it was to be studied. That an inspection of the varieties in configuration of the skull might lead to an Art of reading character is conceivable; but that it could by any possibility lead to a discovery of the functions of the nervous masses to which the skull formed a protecting dome, even supposing that the configurations represented with perfect accuracy the forms of these masses, is assuredly not conceivable by any physiologist. And M. Flourens is thoroughly justified in affirming that Gall, who has given us an anatomy of the brain, 'has not even suspected its physiology. His phrenology, if anything, is a psychology, not a physiology.'* It is to be observed that Gall, who acutely enough saw the impossibility of discovering functions from the simple inspection of organs, contented himself with simple inspection, and never once invoked the aid of the indispensable instrument Experiment. 'On a pendant des siècles entiers,' he says, 'confondu les tendons et les ligaments avec les nerfs, et l'organisation du cœur a si peu conduit les anatomistes à la connaissance de ses fonctions que les artères ont été considérées comme des tubes conducteurs de l'air.'† Perfectly true; and to what does it lead? Evidently to the necessity of determining function by Experiment, where Observation does not disclose it; yet this was precisely the conclusion Gall would not accept. He never experimented himself; he paid no attention to the experiments of others. In fact he had really no other mode of determining function than the extremely fallacious observation of the coincidences of configuration and character. His doctrine required an anatomical demonstration of the important position that the Brain was an apparatus of organs. Each of these organs needed definition. But unhappily science was not sufficiently advanced to give him the requisite materials; and he was too imperfectly versed in biological philosophy to have formed distinct ideas of what constituted an organ.‡

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* *Fonctions du Cerveau*, ii. p. 33.

† Broussais: *Cours de Phrénologie*, 1836, p. 2.

‡ *Fonctions*, ii. p. 35.

The convolutions of the Brain, which Gall has mapped out into several distinct compartments, each compartment being the organ of a distinct faculty, are in reality not more distinct than the several folds of a piece of velvet; and a little reflection discloses the absurdity of supposing that one portion of this velvet could be endowed with different properties from every other portion, simply in virtue of its superficial position. The tissue of which the convolutions consist is the same throughout its folds; and that the *mere form of convolution* has nothing whatever to do with the nature of the psychical faculties, is not only evident *à priori*, but is proved *à posteriori* by the existence of those faculties in animals with unconvoluted brains. Of this more anon.

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* Flourens, *op. cit.* p. 188.

† *Réponse au Rapport de M. Cuvier*, p. 245.

‡ 'Aussi tous les anatomistes ont-ils, à juste titre, traité une telle distribution comme arbitraire et désordonnée, puisque n'étant assujétie à aucune notion rigoureuse de philosophie anatomique sur la différence réelle entre un organe et une partie d'organe, elle comporte des subdivisions en quelque sorte indéfinies, que chaque phrénologue semble pouvoir multiplier à son gré.' Comte: *Cours de Philos. positive*, iii. p. 819.

It was Gall's imperfect conceptions of organ and function which prevented his seeing that this mode of determining function was very misleading. What would he have said to a physiologist, who, hearing that the liver formed bile and sugar, should have assigned the property of bile-formation to one lobe, and the property of sugar-formation to another lobe, no structural differences having been observed? or to one who should assign to the different lobules of the kidney functions as different as are assigned to the different convolutions of the brain?* It is perfectly true that from inspection of an organ no idea of its function can be obtained; and this truth has blinded phrenologists who are not physiologists to the necessity of nevertheless always making anatomy the basis of every physiological analysis. No inspection of the alimentary canal could disclose to us that its function was that of digestion. Nevertheless the function of digestion, except in the crude conception of ordinary men, is only intelligible after a rigorous analysis of the several processes, buccal, stomachal, and intestinal; for the intelligence of each of which, we must assign to each gland its specific secretion, and to each secretion its specific action: a physiologist who should attempt the explanation of digestion on any other mode would justly be slighted by every good biologist in Europe. If Phrenology is the Physiology of the nervous system, it must give up Gall's approximative method for a method more rigorously scientific; and, as Auguste Comte justly remarks, phrenologists, before they can take rank among men of science, must 'reprendre, par une série directe de travaux anatomiques, l'analyse fondamentale de l'appareil cérébral, en faisant provisoirement abstraction de toute idée de fonctions.'*

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* If he relied on a variety of cases in which the sugar-forming property was active and feeble in conjunction with large and small developments of one lobe, this induction would be set aside by the overwhelming force of the induction on which had been established the rule, that without differences of structure there can be no differences of property; and still less force would be allowed to an induction based on coincidences which were far from constant.

§ IV. Application of the Method.

Observation of men and animals furnished Gall with materials from which a rough sketch of mental phenomena was produced; and whatever deficiencies this sketch presented, it had the great and lasting merit of an inductive basis. Instead of deducing a scheme of the faculties from some *à priori* fiction about the nature of the soul, or the simplicity of spiritual substance; instead of deducing the scheme from certain logical and psychological traditions; instead of deducing the scheme from verbal analyses which presented all our faculties as transformed sensations, he sought inductively to ascertain what were the elementary faculties, by ascertaining which of them were manifested separately. 'So far,' says Mr. Combe, 'from a disposition to invent a theory being conspicuous, there appears in the disjointed items of information, which Dr. Gall at first presented to the public, a want of even an ordinary regard for systematic arrangement. His only object seems to have been to furnish a candid and uncoloured statement of the facts in nature which he had observed; leaving their value to be ascertained by time and farther investigation. As soon, however, as observation had brought to light the great body of facts, and the functions of the faculties had been contemplated with a philosophical eye, a system of mental philosophy appeared to emanate almost spontaneously from the previous chaos.' *

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* *Philosophie positive*, iii. p. 821. Comte is favourable to Gall, yet see his remarks on the multiplication of the faculties, p. 823 *sq.*

It was here, in this construction of a system, that the absence of subjective analysis was most injurious. Observation had supplied a mass of materials, and these were roughhewn in a hasty unsystematic way. There was no criticism applied to the observations, no analysis disentangled their complexities. Spurzheim and George Combe introduced several improvements in the nomenclature, and made the system somewhat less incongruous. But no one had the faintest conception of what psychological analysis should be, its means, its conditions, and the problems it had first to solve. No one ever attempted to settle the all-important question, How to determine whether any mental manifestation is the direct product of a Faculty, or the indirect product of two or more Faculties? how to distinguish between Faculties and Modes, between elementary actions and associated actions, between energies and synergies? Not a step beyond rough approximative induction could be taken while this scientific basis was unsettled. Thus while the metaphysicians maintained that Memory, Judgment, Attention, and Will, were elementary Faculties, Gall maintained that they were only Modes of each Faculty; and Auguste Comte, in his modification of Gall's scheme, pronounces them to be Synergies of the intellectual Faculties only. Who is right? Obviously the decision can only issue from some clearly defined principle of analysis, biological or psychological, i.e. derived from decomposition of vital phenomena (as when the instinct of nutrition or the instinct of propagation is affiliated on a distinct physiological law) or derived from the decomposition of psychical phenomena (as when a complex act is resolved into its elementary constituents).

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* Combe: *System of Phrenology*, 3rd edit. p. 53.

Such a clearly defined principle was unsuspected by Gall. He accepted the rude indications of observation as sufficient. Observing that some men manifested a tendency to theft, which was not manifested with equal energy by all men, but which acted blindly and persistently, he at once concluded that there was a special organ for this special instinct. Spurzheim was acute enough to see that this instinct was less special, and that theft was the manifestation of acquisitiveness. In like manner, the faculty of Cunning was by Spurzheim reduced to the simpler faculty of Secretiveness, by eliminating the intellectual element which gave it the special character of Cunning, leaving thus the primitive instinct of Secretiveness. Again, Gall observing that some men were distinguished among their companions by the activity of their veneration, at once concluded that Veneration was an elementary faculty; though a very slight consideration of the phenomena might have shown him its composite nature. By an unfortunate coincidence, the convolution which Gall assigned to this faculty of Veneration in man, was found to be conspicuously prominent in sheep. A recent phrenologist explains this coincidence by affirming that the identity of organs in nowise determines identity of function in man and animals—a suicidal admission which he thus defends: If we analyse the mental phenomenon of Veneration, we find that it has two elements: 1, the abstract tendency to respect; 2, the idea of the object addressed. 'Tout acte de vénération humaine s'accomplit de cette manière et dérive *de l'action combinée de circonvolutions dont plusieurs n'existent pas dans le mouton.*' *

What function, then, has this organ in the sheep? M. Castle thinks that the gentleness and submission of the sheep are due to this instinct of veneration. Broussais sees in it the tendency of the flock to follow a leader.† The explanation seems plausible until we examine the brain of a lion or a tiger, and find the same organ there also. As M. Leuret pleasantly remarks, 'L'organe de la vénération pour ces derniers, il faut en convenir, est un organe parfaitement inoccupé.' *

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* Castle: *Phrénologie spiritualiste*, 1862, p. 19.

† Broussais: *Cours de Phrénologie.*

It is to be observed that the phrenologists have been fully alive to the synergy of organs in producing mental phenomena, and have often displayed great acuteness in their indications of synergies; but what they have not done is to establish a principle which could decide whether any given manifestation were the direct function of an organ or the product of various organs. Hence their extremely questionable admission of Wit, Ideality, Colour, Individuality, and Eventuality as original faculties; while they reject others equally special, such as a Memory for Dates, or a Memory for Names. If observation suffice, surely the frequently-observed facts of some men being incapable of remembering important dates, such as the birthdays of their children, while other men seem to remember with facility dates the least important to them, ought to constitute a claim for the independence of an organ for Dates; the faculty being not more legitimately affiliated on Individuality or Eventuality than Wit is affiliated on Comparison.

Gall's Criticism on the psychologists is effective. After enumerating their various and discordant schemes of the elementary faculties, he remarks, that whether a scheme includes two, three, four, or seven, the error is always the same, namely, that of mistaking abstractions for faculties. 'None of them designates an instinct, a propensity, a talent, or any definite moral or intellectual faculty. How can we explain by sensation, attention, comparison, reasoning, desire, the origin and exercise of such instincts as propagation, love of children, adhesiveness, the talents for mechanics music, mathematics, poetry, &c.?' Go into a family and observe the strongly-marked disposition of its members: one is proud, the other servile; one is quarrelsome and destructive, the other timid and affectionate; one has an irresistible

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* LEURET: *Anatomie comparée du Système nerveux*, 1839, i. p. 568.

propensity to steal, another to construct machines; one is surprisingly musical, and his brother cannot distinguish one tune from another. The same nursery, the same home, the same masters, the same companions, fail to produce similar characters in differently organised brothers and sisters. If education and surrounding circumstances, he asks, had the effect of determining the direction of the faculties, and creating aptitudes—as people commonly suppose—how is it that the female bird does not sing like the male? Why do not chickens learn to coo like the pigeons they live with? Why does each species preserve its peculiarities? Above all, why do not animals suckled and reared by parents of another species, manifest the dispositions of their nurses? Would any companionship with philosophers develop in the juvenile athlete a power of seizing abstract relations and pursuing a long chain of reasoning by means of symbols? Would the society of a herd of antelopes develop in the ram the sensitive grace and agility of a deer? Hence the conclusion, confirmed by zoological comparison, that although we are not born with Innate Ideas, we have Connate Faculties and Aptitudes. But even this requires a qualification which Gall saw to be important, namely, that just as the new-born infant has not the maturity of organisation which permits the full performance of all physical functions—these gradually emerging as development goes on—neither has he the maturity of cerebral organisation which permits the performance of all the psychical functions; the Faculties grow and are developed; and their growth is dependent on the development of the organism.

Kant's great principle of seeking in the Laws of Thought a solution of the problems of Philosophy, was by Gall approached from the biological side. 'Si l'on reconnaît que les sens procurent des matériaux nombreux, que l'esprit travaille par le moyen d'instruments plus élevés, et si l'on peut établir que l'homme intérieur lui-même est doué d'une multitude de dispositions, nous devons chercher nos idées et nos connaissances en partie dans les phénomènes du monde extérieur et dans leur emploi raisonné, *et en partie dans les lois innées des facultés morales et intellectuelles.*'* It is true that his attempt to discover these Laws was unsuccessful; but the attempt was made fertile by his conception of the necessity (not seen by Kant) of seeking the organic laws in the organism itself. Kant sought them in subjective analysis.

Gall further saw that not only must the Laws of Thought result from the Laws of the Organism, but that the plurality of Faculties which observation indicated as existing, necessarily implied a corresponding plurality of organs. To attribute the moral and intellectual faculties vaguely to the organism or the 'temperaments' was a sterile procedure. The organism as a whole does not see when the eye is removed, does not secrete bile and saliva when the liver and salivary gland are obstructed, nor does it think when the brain is obstructed. And if the physiological functions have each of them a separate organ, how can the psychical functions be without their separate organs?

Indeed all that relates to the general propositions respecting a plurality of functions, and a plurality of organs, Gall must be admitted to have triumphantly established. It is only in the details that he is unsuccessful.

§ V. VERIFICATION OF THE HYPOTHESIS.

Having indicated the chief points in the Method, I have now briefly to specify the chief reasons which determine the rejection of Gall's hypothesis. That it was a luminous and fertile conception, has been already acknowledged. Like all other conceptions, it had to be confronted with reality. After such a confrontation it would either pass from the condition of an hypothesis to that of a verified theory, or it would be relegated to the limbo of tentative failures. At the end of fifty years of attempted verification what is the result?

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* *Fonctions*, i. p. 84.

The broad, palpable result to which I would first draw attention is that Phrenology, assailed by ridicule, misrepresentation, argument, and passionate contempt, such as usually salute every new and revolutionary hypothesis, has not survived this opposition, has not lived down its ill repute, and converted its antagonists, or the sons of its antagonists, but has lingered with a feeble life of sectarian tradition, inspiring no new prophets, raising up no influential disciples. If vehement opposition is, unhappily, one almost universal consequence of the promulgation of a new conception, there is, happily, another universal consequence of every promulgated truth, namely, that it spreads wider and wider, and irresistibly draws successive generations into its fold. Ridicule never killed any important truth; persecution never finally suppressed it. The obstinacy of a few disciples prevents the sacred flame from dying out; by degrees it attracts more serious attention, and this attention discovers fresh evidence; the adhesion of serious minds checks the levity of superficial objectors; the ridicule ceases, and calm investigation proceeds. At this stage the new doctrine perishes, or rapidly passes into general acceptance.

How has Phrenology borne the test? Instead of surviving opposition it has decayed with the declining opposition. It has ceased to be ridiculed, it has ceased to be declaimed against as immoral, and—it has ceased to occupy attention. While science has accepted much of what is acceptable in Gall's method and results, no one has arisen to extend and improve those results, no school of phrenological investigators has kept pace with the discoveries of Anatomy and Physiology, nothing has been added to the labours of Gall, Spurzheim, and George Combe, nothing has been done to bring the doctrine into general acceptance. Here and there a clever man is found who accepts Phrenology; but he is generally (I think it may be said always) one imperfectly acquainted with the results of biological and psychological research. At any rate, not one among the eminent physiologists, psychologists, or physio-psychologists of the present day, accepts the scheme as more than a rude hypothesis, while the vast majority reject it as a false hypothesis.

Such has been the result of fifty years' experience. Instead of gaining ground it has been losing ground. Verification has disproved, not confirmed, the hypothesis. Observation has not supported the Craniosocopy; nor has anatomical research confirmed the Physiology. The disproof is overwhelming, and on this account only has the doctrine sunk into neglect.

In the brief space to which these remarks must be restricted, I cannot, of course, pretend to marshal a tithe of the evidence which has been adduced in disproof. But there are certain crucial instances which would alone suffice to show that the hypothesis is unacceptable. I will begin with Cranioscopy, because that has not only the largest mass of facts in its favour, but is also the aspect of the hypothesis which phrenologists most resolutely advance. That the great diversities in mental manifestations may be correlated with the great diversities of cranial configuration is a proposition, probable in itself, and rendered almost certain by the facts phrenologists have collected. It is probable that every part of the physical organism carries with it the sign of some psychical peculiarity; could we only read that sign! And so long as phrenologists content themselves with discerning and registering all the cases of coincidence between certain manifestations and certain configurations, they are well employed. Such coincidences, however, must be rigidly determined, and, like all other empirical facts, must be held as mere sign-posts, until they be proved invariable, and until they be bound together by some ascertained law. Now it will scarcely be denied that the observed correspondences between special cranial configuration and mental peculiarities, do, in many instances, fail. Proportionately large 'organs' are sometimes observed in connection with very mediocre powers; proportionately small 'organs,' on the contrary, with very splendid powers. I wish rather to understate than overstate the difficulty, and I will not seek to gain any advantage by multiplying exceptions; it is enough for the present argument if any exceptions have been observed; because any exception to an empirical generalisation is fatal to it *as* an empirical generalisation, and can only be set aside when the generalisation has ceased to be empirical, and has become scientific. Thus, I am aware that phrenologists explain each exception to their perfect satisfaction. But, in explaining it, they quit the sphere of empirical observation to enter that of science; and thus their explanation itself has only the validity which can be given it by theory. To make my meaning more definite, let us suppose that the empirical generalisation of large chests being the cause of great muscular power, is under discussion. As an observed fact—an empirical fact—the correspondence of broad chests and muscular strength, is a valuable addition to our empirical knowledge. Taken as an indication, no one disputes the fact; but taken as a cause, and connected with a physiological theory, it bears quite a different value. The physiologist may say that the fact proves breadth of chest to admit of more perfect oxygenation of the blood, and thus causes greater muscular power. Against such a theory we bring the fact that no absolute and constant relation between broad chests and muscular power exists; if we find large chests accompanying strength we also find small chests in certain lithe, wiry frames accompanying even greater strength; the empirical generalisation is thus destroyed, the explanation is shown to be imperfect, and the ratio of muscular power is shown to depend on some other condition besides the size of the chest.

When phrenologists explain the exceptions to their empirical facts, they are on the field of pure science, and their explanations can only have value in proportion to the validity of the scientific principles invoked; and thus the Art of Cranioscopy is perpetually forced to recur to Physiology.

Considered empirically, we must say that the mass of observations hitherto collected establishes that *a* causal relation of some kind does exist between the conformation of the skull and the character. No one acquainted with these observations will deny that they are far too numerous to be set down as mere coincidences; but they require much more precision, and, above all, they require a rational basis, before they can be accepted as more than empirical indications. If a hundred men having a given cranial configuration be found to manifest an unusual power of Calculation, and if a hundred men having very ordinary power of Calculation be found to possess nothing noticeable in the cranial configuration previously fixed on as related to number, the conclusion inevitably is that *a* causal relation must exist between the configuration and the manifestation; but whether *the* causal relation is the one phrenologists have assigned is not proved by such observations; and should any one unequivocal exception be observed, it alone would suffice to prove that *the* relation was still to seek. This is a verdict of inductive Logic which has been strangely disregarded both by phrenologists and their opponents. The opponents of phrenology are too apt to argue as if the exceptional cases destroyed the cases of observed correspondence; the advocates of phrenology almost universally argue as if the exceptions were simply unexplained phenomena by no means impugning the legitimacy of their principles. They cling to the facts of correspondence, and, aware of the logical error of their opponents, aware that no amount of exceptional cases can destroy the evidence which proves *a* causal relation, have overlooked the equally imperative conclusion that one exceptional case points to an incompleteness in the generalisation; and where the exceptions are numerous the incompleteness must be great.

Now nothing is more certain than that observation in daily life, and observation of remarkable cases, disclose numerous and striking exceptions. The writings of anti-phrenologists abound in such. I will here mention but one, that of Mangiamele, the calculating boy, an excellent account of which is to be found in the work named below.* He was the son of a Sicilian shepherd, and from infancy had given signs of a remarkable calculating power, although he had not been taught arithmetical methods, nor indeed anything of the science of Number. He was entirely self-taught; yet the rapidity with which he solved the most intricate arithmetical problems without the aid of graphic signs, was marvellous, and astounded the Académie des Sciences. Here was entirely a crucial instance for Phrenology: a faculty so exceptional in its vigour must have a corresponding development of its organ. But what was the fact? Instead of an eminence on that part of the skull assigned to the organ of Number, there was an absolute *depression*. The fact was admitted by the phrenologists; and indeed was too patent to be disputed; but Broussais and Dumortier endeavoured to evade it by affirming that Mangiamele had, in reality, no special development of the faculty of Number, he effected his marvellous feats of calculation by—genius, imagination, and extraordinary powers of induction and generalisation! The dilemma here is formidable; either the boy could subtract, divide, and multiply with astonishing rapidity and precision by means of his Causalty, Comparison, Eventuality, Individuality (the organs invoked to explain his manifestations), in which case the organ of Number, established by Gall, on examination of heads of celebrated calculators, is a fiction and a superfluity, the functions being performed by other organs; or one organ may take upon itself vicariously the function of another, and all phrenological observation becomes doubtful. A man destitute of Tune may thus enchant the ears of Europe by means of his Causality; another may fill his house with the squalling children of his neighbours by the operation of his Comparison or Individuality. We can never say to what organ any action is due; and all the phrenological cases are discredited, on such a supposition. George Bidder is always cited as a clenching case of correspondence between calculating power and the configuration assigned to

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* Louis Piesse: *La Médecine et les Médecins*, 1857. From my review of this work in *Blackwood's Magazine*, December, 1857, in an article entitled 'Phrenology

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in France,' I have borrowed the account in the text. In the same article there are other striking cases.

Number. So far good. But now comes the case of Mangiamele, with powers not less remarkable, and on his skull there is a depression instead of an elevation. That is to say, the faculty is present in the absence of the organ—or, to speak more accurately, the faculty is enormous where the organ is unusually small.

Another and still more convincing example is that of the cerebellum assigned as the organ of amativeness, and considered by phrenologists to be one of the best established organs in their scheme, founded upon numerous facts of comparative anatomy, pathology, and common observation. It is only necessary to interrogate the works of comparative anatomists, physiologists, and pathologists, to see that the disproof of this hypothesis is overwhelming. What the functions of the cerebellum are, we do not know as yet; but one thing we positively know, and that is, that it is *not* the organ of sexual desire.*

I might take each organ in turn, and show that against the facts phrenologists adduce in its favour, an array of facts can be adduced against it, sufficient, if not to disprove altogether the cranioscopic hypothesis, at any rate to throw such doubt upon it as to be reconciled only by a rational explanation, which must come from a true psychological law. The rational explanation would either show the exceptional facts to be perturbations of the law; and these perturbations might or might not admit of reduction to some subsidiary law; or it would show that the generalisation itself was imperfect. In any case the facts observed preserve their value; both the facts against, and the facts in favour of the generalisation. That the counterfacts invoked by anti-phrenologists are not always of the nature of perturbations, but of direct contradictions, may be readily shown. Although inductive Logic refuses to conclude against the cases of correspondence simply on the ground of cases of non-correspondence (perturbations), it forces us to conclude on the ground of direct contradiction. Let us consider the case of Mangiamele. Fifty examples of the organ of Number largely developed, without corresponding activity of the functional manifestation, would not disturb the value of the observed correspondences; for these imperfect manifestations may have been due to various perturbing causes. But one case of the presence of an unusual activity of the function in the absence of the organ, or rather in a remarkable deficiency of the organ, is a direct contradiction of the supposed relation between the function and the organ; and leads either to a relinquishment of the hypothesis, or dissolves the very basis on which phrenology is erected. For if functions can be active where the corresponding organs are deficient, or if one organ can take on the function of another, cranioscopical indication is fallacious.

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* Even M. BOUILLAND, who accepts GALL's principles, but is unable to see the evidence for the localisations, and consequently rejects Cranioscopy, has recently declared, 'quant à la localisation de l'instinct de la génération dans le cervelet, je suis un de ceux qui l'ont combattue de la manière la plus résolue, mais toujours en respectant le principe fondamental de la pluralité et de la spécialité des organes cérébraux.' *Bulletin de l'Acad. de Médecine*, avril 1865, p. 583.

It is, therefore, simply on the ground of non-correspondence with fact, as observed roughly in common, and as rigorously tested by the more precise methods of science, that Cranioscopy has failed to gain general acceptance. Phrenologists have collected cases with great assiduity; these present an imposing array; but scientific scepticism brought to their examination discloses fatal discrepancies. I say nothing of the loose way in which many of the phrenological facts are determined, though this alone would greatly diminish their presumptive value:* it is enough that daily observation, practising the *same* loose methods of determination, constantly alights on glaring discrepancies; and that scientific observation, guided by precise methods, uniformly discredits the phrenological localisations.

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* 'Au lieu d'employer le mètre et la balance dans un ordre de faits qui le comporteraient si bien, Gall et Spurzheim ont toujours et leurs partisans ont presque toujours préféré la simple inspection. Les mots "plus grand, plus petit, énormément développé, il est facile de voir," se retrouvent à chacune de leurs pages, mots très-expressifs pour les hommes prévenus, mais qui dans la réalité n'ont le plus souvent aucune valeur.' LEURET: *Anatomie comparée du Système nerveux*, i. p. 430. To the same effect PARCHAPPE: *Recherches sur l'Encephale*, 1838, i. p. 10. The credulity of phrenologists is at times quite naïve. Gall mentions the case of a bookseller born blind, who had nevertheless, by means of his organ of colour, precise notions of the distinction and harmony of colours' (*Fonctions*, v. p. 85); and Mr. George Combe, not in the least sceptical of such a 'fact,' records that he also knew 'a blind man who distinguished colours with great accuracy by means of touch' (*Phrenology*, p. 413). Could not Mr. Combe detect

But Cranioscopy might be true, or sufficiently true to warrant the acceptance of its facts of correspondence between cranial configuration and mental manifestations, yet Phrenology, or the Physiology of the Brain which has hitherto formed its scientific basis, might be very far from true. Gall indeed supposed otherwise. He maintained that it was purely by cranioscopic indications we could determine the cerebral functions.* Unless the organs were all situated at the surface of the brain, and (note this point!) *were limited within the superficial limits*, Cranioscopy could be no more than Physiognomy, a rough indication of general conditions, not an anatomical guide to functions. In other words, the basis of Phrenology rests on four positions:

1. That the grey matter of the convolutions is the organic substance of all psychical actions.
2. That no other part of the nervous system has any essential connection with the mind.
3. That each distinct faculty has its distinct organ.
4. That each organ is a limited area of grey matter.

Of these four fundamental positions, only the third is true, and even that is left in vagueness, for Gall nowhere determines what constitutes a Faculty, he nowhere describes an Organ with anatomical precision. When the occasion presented itself he was contented with vaguely saying: 'I call an organ the material condition which renders the exercise or manifestation of a faculty possible.' † He held—and in this he opposed the materialist opinion—that faculties were spiritual powers which were *manifested* by means of material organs, but were in no sense the *products* of the organs.

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the difference between distinguishing colours and distinguishing coloured objects? the one being beyond the sense of touch, the other being simply fineness of touch.

* *Fonctions*, iii. pp. 2, 4.

† *Ibid.* i. 292.

'The muscles and bones,' he said, 'are the material conditions of movement, but they are not the faculty which causes movement; the *ensemble* of the organization of the eye is the material condition of sight, but is not the faculty of sight. I call the material condition which renders possible the manifestation of a moral quality or an intellectual faculty *an organ of the soul.* I say that man in this life thinks and wills by means of the brain; but if any one concludes that the thinking willing being is the brain, or that the brain thinks and wills, this is as if he said the muscles are the faculty of movement, or that the organ of sight and the faculty of vision are one and the same.'* Whence it appears that his conception of Faculty was as vague as his conception of Organ. But even on his own principles it was manifestly absurd to define an organ as the material conditions, and then to restrict these conditions to one small area of the surface of the brain.

Thus only one of his four positions can be accepted as true; the other three are all more or less false. If it is mainly to Gall's impulsion that science owes the definite notions which enable us to reject his hypothesis, we must pay him our tribute even while rejecting his views. There is nothing derogatory to him in asserting that his knowledge of the nervous system was incomplete, and that he had very imperfect notions of what, strictly speaking, constituted an Organ. On the latter point, Biology is still without a satisfactory definition; and many biologists confound *properties of tissue* with *functions of organs.* Having made this general remark, I will proceed to show, briefly, yet it is to be hoped conclusively, the untenableness of Gall's cerebral views.

1. *The grey matter of the convolutions.* 'L'on sait que les fonctions, propres à chaque système de nerfs, sont réalisées dans leur expansion périphérique; or j'ai démontré que les circonvolutions du cerveau ne sont autre chose que l'expan-

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* *Fonctions,* ii. 232.

sion périphérique des faisceaux dont il se compose ; par conséquent, les circonvolutions du cerveau doivent être reconnues pour les parties où s'exercent les instincts, les sentimens, les penchans, les talens, en général les forces morales et intellectuelles.'*

Waiving for the present all consideration of the second proposition, which excludes every other portion of the nervous system, and limits psychical functions to the convolutions of the cerebrum and cerebellum, I remark that Gall altogether fails to seize the distinction between functions and properties of tissue, and consequently makes no attempt to define each cerebral organ, beyond the limitation of a given superficial area in an *uniform* substance. The *properties* of the velvet (to recur to our former illustration) depend on the structure of the velvet; the *uses* to which that velvet is put are in no sense determined by the *folds* in the velvet, but by the *connections* of each part with other parts: thus the skirt, boddice, sleeves, wristbands, and waistband, are various distinct parts of the velvet dress, but the properties of the velvet do not vary with this variation of the uses which they subserve. It is the same with the grey matter of the brain: that also is an uniform substance, variously folded into convolutions, and variously connected with different parts of the organism ; the special *property* of this uniform substance is Sensibility; the special *functions* subserved by it, depend upon its organic connections. In connection with the various Senses, its functions will be perceptions of Sight, Sound, Touch, Smell, and Taste. In connection with visceral organs, its functions will be perceptions of systemic sensations. In connection with muscular organs, its functions will be volitional. The brain has often been compared to a galvanic battery. Let us adopt the comparison. On the ends of the two conducting wires, two pieces of charcoal are fixed, and the result is the electric light; the two conductors are placed in a solution, and the result is a chemical decomposition; the two conductors are placed in a mixture of gases, and the result is a chemical composition; the conductors are placed in relation with a telegraphic apparatus, and the result is a transmission of a message from one country to another. But all these various results have been due to the various *applications* of the electric force, they have not been due to varieties in the battery. By no inspection of the battery could these results have been divined; by no numeration of the several galvanic couples could these phenomena have been discriminated. The phenomena did not wholly depend on the plates of zinc and copper; they did not at all depend upon the relative positions of those couples in the battery; yet to enumerate the various convolutions of the cerebrum, and affix to each, and to separate areas of each, the various functions of the mind, is as unscientific as to assign the electric light to one couple, the telegraph to another, and the chemical decomposition to a third couple, irrespective of their connections.

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* *Fonctions*, ii. p. 13.

Of this Gall had no suspicion. As I have said, he had the vaguest ideas of what constituted an organ; and although he declared, and truly declared, that the faculties, being separate, required separate organs, he nowhere endeavours to demonstrate a cerebral organ. At one time he seems to consider it a bundle of fibres; at another a single fibre. That it could be *neither* he never suspected. 'Le cerveau consistant en plusieurs divisions dont les fonctions sont totalement différentes, il existe plusieurs faisceaux primitifs, qui par leur développement contribuent à le produire conformément aux lois auxquelles obéissent les autres systèmes . . . nous rangeons parmi les faisceaux les pyramides antérieures et postérieures, les faisceaux qui sortent immédiatement des corps olivaires, et encore quelques autres.'* Granting the hypothesis, we should have to remark first, that the bundles were too few for the seven-and-twenty faculties; and secondly, that these bundles are not to be discriminated on the area of the convolutions. Subsequently, he was disposed to regard every fibre in the nerves, or in the brain, as a little organ by itself.* The conception of a fibre or a bundle of fibres constituting an organ, will surprise the philosophic biologist.

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* GALL: *Anat. et Physiol. du Système nerveux*, i. p. 271. To the same effect SPURZHEIM: *Observations sur la Phrénologie*, pp. 74, 94.

It seems to me, that the objection which arises from the preceding exposition is fatal to Gall's scheme. He affirmed that the brain was not a single organ having a single function, but a complex unity of various organs having diverse functions. He established this position by a large array of evidence. But when he came to take the next step, and assign each function to its particular organ in the brain, he was wholly without a principle of determination, he neither conceived steadily what an organ was, nor attempted anatomically to discriminate the parts of the brain that each organ involved.† Considering that there are some sixty distinct parts in the whole encephalon, each of which has received its distinct name, we were surely in need of a guide which would lead us amid the labyrinth, and point out which parts were severally grouped into distinct organs? Gall, who revolutionised the mode of dissecting the brain, had no better guide than what cranial configurations might suggest. The internal structure of this eminently complex apparatus was to be disregarded; and our attention fixed on the variations of the surface. One might as reasonably explain the mechanism of the clock by the position of the figures on its dial.

The subject of the convolutions is one which might furnish an instructive chapter, did space permit; but I must content myself with affirming that the researches of anatomists have disproved every point advanced by Gall. Curiously enough, M. Camille Dareste has placed beyond dispute the fact, that the number and depth of the convolutions bear *no* direct proportion to the development of intelligence, whereas they *do* bear a direct proportion to the size of the animal. Thus, given the size of the animal in any genus, and he can predict what are its convolutions; or vice versa, given the convolutions, and he can predict the size of the animal. 'Toutes les espèces à cerveau lisse ont une petite taille; toutes les espèces à circonvolutions nombreuses et compliquées sont, au contraire, de grande taille.' *

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* *Fonctions*, i. p. 64.

† M. Parchappe has well remarked, 'Il est singulier que Gall, tout en perfectionnant l'anatomie du système nerveux par d'importants travaux qui constituent son titre scientifique le plus glorieux, n'ait pas fait porter ses recherches sur les points qui eussent précisément pu servir à vérifier la légitimité de son système, s'il avait pu démontrer que la périphérie des hémisphères cérébraux se décompose effectivement en organes distincts, correspondant aux fonctions distinctes dont il admettait l'existence.' *Bulletin de l'Acad. de Médecine*, mai 1865, p. 684.

In a word, the convolutions cannot be accepted as the 'organs' of the faculties; nor even as correctly indicating the organs. They are simply forms of an uniform tissue; this tissue has a peculiar property, Sensibility, which applied in different connections serves various functions; but the *organs constituted out of these connected parts* are no more to be identified with the particular portions of the vesicular tissue which supply their Sensibility, than the telegraph is to be identified with the plates which supply its electricity. Thus it is that the area of convolution which in one man might be connected with a peculiar mechanism, in another might be so imperfectly connected with that mechanism, or might supply so imperfect a mechanism, that the results would be different or even opposed. Of this Cranioscopy can tell nothing. It is limited to the surface. And hence it is that the skull is considered sufficient evidence. The surface of the skull tells as much as the surface of the brain; as much and as little.

I will merely in passing observe, that the axiom of which so much use is made by phrenologists, 'other things equal, size is the measure of power,' though indisputable, is fallacious, since the 'other things' never are equal. If the external indications were expressions of the internal structure, size would be a measure of power, and Cranioscopy a guide to character: unhappily it is not so.

Let us now pass to the second position on which Phrenology is based, that the cerebrum only is the seat of the psychical faculties. Gall has here the vast majority of biologists on his side. There is scarcely one teacher in a hundred who does not declare the Brain, and the Brain exclusively, to be the organ of the mind. I have elsewhere* marshalled abundant facts and arguments in disproof of this illogical and obstructive hypothesis; but for the present it is enough to point out that Gall was in opposition to his own principles when he thus limited the seat of psychical faculties. In opposition to logic, for he thereby implied that community of structure did not carry community of property: implied that ganglia in one part of the system had not the same Sensibility as ganglia in another. In opposition to zoological observation, for he thereby implied that the instincts and propensities exhibited by animals with brains could not be manifested by animals without brains, whereas it is notorious that the instinct of propagation, the instinct of destructiveness, the instinct of constructiveness, and others, are manifested by animals having no brains, nothing but simple ganglia.

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* *Annales des Sciences naturelles*, 3 ème série, xvii. 30, and 4ème série, i. 73.

He had indeed a glimpse of the logical error when he was treating of the grey substance of the convolutions as the origin of the nerves, for he there asks, 'pourquoi auroit-elle dans le cerveau une destination différente de celle qu'elle a dans les autres systèmes nerveux?' † Had he not been misled by his hypothesis of the nutritive office of the vesicular substance (long since refuted), and had he conceived Sensibility as the property of this tissue, he would have reversed his question and asked, 'Why has this tissue Sensibility in the convolutions, and not in every other ganglionic mass?'

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* *Physiology of Common Life*, vol. ii. RUDOLPH WAGNER finds himself compelled by the evidence of experiment to retract his former views and to admit the existence of psychical manifestations in the absence of the brain. 'Je reconnais même qu'un certain nombre de phénomènes psychiques persistent chez les pigeons auxquels on a enlevé le cerveau, le cervelet, et une partie du mésocéphale.' *Brown-Séquard's Journal de la Physiologie*, 1861, iv. 551. My experiments on reptiles and insects showed the persistence of psychical manifestations after the head had been cut off.

† GALL: *Anat. et Phys.* i. 242.

Gall's principles demanded that the subjective analysis should correspond with the biological analysis, and that mental manifestations should be affiliated on the physical organs; but his Cranioscopy could not accommodate itself to such a procedure: it demanded that the brain should be the exclusive seat of the psychical faculties, and that the surface of the brain should in its varieties reveal the organs of those faculties.

If the reader has followed these few pages with assent, he will see that the basis of Phrenology is laid on shifting sand; and that if men of science have long since declined to occupy themselves with the hypothesis, it is because the alleged facts of Cranioscopy are not found to be sufficiently accurate and general to warrant confidence in that Art, and because the Psychology and Physiology which Gall and his successors offer us, are neither reconcileable with psychological analysis nor with the present condition of Anatomy and Physiology.*

The course of our History now leads us to the important movement in Germany, which, begun by Kant, ran a rapid and brilliant career till it came to a crisis in the Hegelian school. I have placed Gall before Kant, although chronology is thereby somewhat disturbed, in order that from Kant the course of evolution might be followed without interruption.

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* Space has not permitted the citation of a tithe of the arguments and observations which discredit Phrenology. The student is referred to Lélut: *Rejet de l'Organologie*, and his subsequent work *La Physiologie de la Pensée*, for conclusive examples against the special localisations; also to Peisse, *La Médecine et les Médecins.* With regard to Anatomy and Physiology almost any and every modern work may be consulted; but Leuret and Gratiolet, *Anatomie comparée du Système nerveux*; or Wagner, *Neurologische Untersuchungen*, may be specially named, the former abounding in facts drawn from comparative anatomy, which admit of no escape.

NINTH EPOCH.

Recurrence to the fundamental question respecting the Origin of Knowledge.

CHAPTER I.

KANT.

§ I. LIFE OF KANT.

IMMANUEL KANT was born at Königsberg, in Prussia, 22nd of April, 1724. His family came originally from Scotland, and changed their name of Cant into Kant to suit the German pronunciation. This Scottish origin, when taken in conjunction with his philosophical connection with Hume, has some little interest. His father was a saddler, a man of tried integrity. His mother was somewhat severe, but upright, speaking the truth, and exacting it. Kant was early bred in a love of truth; and had before him such examples of moral worth as must materially have contributed to form his own inflexible principles.

Madame de Staël has remarked, that there is scarcely another example, except in Grecian history, of a life so rigorously philosophical as that of Kant. He lived to a great age, and never once quitted the walls of murky Königsberg. There he passed a calm and happy existence, meditating, professing, and writing. He had mastered all the sciences; he had studied languages, and cultivated literature. He lived and died a type of the German Professor: he rose, smoked, drank his coffee, wrote, lèctured, took his daily walk always at precisely the same hour. The cathedral clock, it was said, was not more punctual in its movements than Immanuel Kant.*

He was early sent to the University. There he began and there he ended his career. Mathematics and physics principally occupied his attention at first; and the success with which he pursued these studies soon manifested itself in various publications. He predicted the existence of the planet Uranus; and Herschel himself, after discovering it, admitted Kant's having first announced it.

But none of these publications attracted much attention till the renown of his *Critique of Pure Reason* had made everything produced by him a matter of interest. Nor did the *Critique* itself attract notice at first. The novelty of its views, the repulsiveness of its terminology and style, for some time obscured its real value. This value was at length discovered and made known. All Germany rang with praises of the new philosophy. Almost every 'chair' was filled by a Kantist. Numberless books and not a few pamphlets came rapidly from the press, either attacking or defending the principles of the Critical Philosophy. Kant had likened himself to Copernicus. The disciples likened him both to Copernicus and Newton, declaring that he had not only changed the whole science of Metaphysics, as Copernicus changed the science of Astronomy, but had also consummated the science he originated.

The *Critique* was, he tells us, the product of twelve years' meditation. It was written in less than nine months. These two facts sufficiently explain the defects of its composition. In his long meditations he had elaborated his system, divided and subdivided it, and completed its heavy and useless terminology. In the rapidity of composition he had no time for the graces of style, nor for that all-important clearness of structure which (depending as it does upon the due gradation of the parts, and upon the clearness with which the parts themselves are conceived) may be regarded as the great desideratum of a philosophical style.

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* He mentions having once been kept two or three days from his promenade by reading Rousseau's *Émile*, which had just appeared.

But in spite of these defects—defects which would have been pardoned by no public but a German public—the *Critique* became celebrated, and its author had to endure the penalty of celebrity. He was pestered with numerous calls of curious strangers, who would not leave Königsberg without having seen him. To the curious were added the admiring. Enthusiastic scholars undertook long journeys to see their great master. Professor Reus one day walked into his study, saying brusquely that 'he had travelled a hundred and sixty miles to see and speak with Kant.' The visits became so numerous, that in the latter part of his life he contented himself with merely showing himself at the door of his study for a few minutes.

Kant never spoke of his own system, and from his house the subject was entirely banished. He scarcely read any of the attacks on his works: he had enough of Philosophy in his study and lecture-room, and was glad to escape from it to the topics of the day.

He died on the 12th of February, 1804, in the eightieth year of his age, retaining his powers almost to the last. He latterly, during his illness, talked much of his approaching end. 'I do not fear death,' he said, 'for I know how to die. I assure you that if I knew this night was to be my last, I would raise my hands, and say "God be praised!" The case would be far different if I had ever caused the misery of any of his creatures.'

A picture of Kant's daily habits, and many interesting traits of his character, will be found in the works named below.* I cannot find space for such details; nor for more than a passing mention of Kant's relation to Swedenborg, of which such unjustifiable use is often made by the admirers of the latter, who proclaim with emphasis, that Kant testified to the truth of Swedenborg's *clairvoyance.* He did nothing of the kind. In his *Letter on Swedenborg** he narrates two of the *reported* cases of Swedenborg's *clairvoyance,* and says he knows not how to disprove them, they being supported by such respectable testimony; but he nowhere testifies to them himself; and in the *Träume eines Geistersehers,* no less than in the *Anthropologie,* §§ 35 and 37,† his energetic contempt for Swedenborgianism and all other *Schwärmerei* is unequivocally expressed.

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* Borowski: *Darstellung des Lebens und Charakter Immanuel Kant's*, 1804: a biography revised by Kant himself, though not published during his lifetime. Wasianski: *Immanuel Kant in seinem letzten Lebensjahren*, 1804. This has been reproduced by De Quincey: *Works*, iii., 'Last Days of Immanuel Kant,' where the English reader will do well to seek it. Schubert: *Kant's Biographie* in the edition of Kant's works by Rosenkranz and Schubert. Perhaps the best of all the biographies is that in Kuno Fischer: *Geschichte der neuren Philosophie*, two large volumes of which are devoted to Kant.

It is nearly a hundred years since the *Kritik* was published, and philosophers not only still meditate on it, but dispute as to the meaning of its cardinal passages. One is tempted to suspect that much of its fascination lies in its obscurity. Students first repelled are next attracted by it; piqued into vanquishing the difficulty, they end by overvaluing their conquest. When translated into the language of European thought, I believe Kant's special contributions are nowadays of slight value, and that his psychology almost everywhere must be rejected; hence I cannot withstand the conclusion, that had he written intelligibly he would seldom now be read. Be this as it may, his style is positively disgraceful. Speaking from a tolerably extensive acquaintance with such literature, I can name no other work of real power (and the power of the *Kritik* is titanic) which exhibits a like disregard of every condition of style. Its terminology, though repulsive, may have been advantageous; but its composition is inexcusable. The sentences are long, clumsy, involved; the separate clauses are seldom well constructed, and they are thrown together rather than logically subordinated. But this is not all. The phraseology is approximative when it needs sharp precision, and is vacillating to a remarkable degree. 'Kant,' says Mr. Mahaffy, 'honestly confesses in the conclusion of his second preface, that he feels he has no power of expressing himself clearly; and true to his word he always thinks he is explaining a matter by talking about it, and going round it, and enforcing it by mere variation of language; and yet in most cases his first statement is by far the best.' The great thinkers, Descartes, Spinoza, Leibnitz, Hume, subtle as they were, had sufficient mastery of language to present their thoughts in a style that was at once intelligible and engaging. Their profundity was clear depth. To find a companion for the *Kritik* we must go back to the work of the great geometer Archimedes, whose propositions require to be read over and over again before the student seizes the meaning that is to be demonstrated, and whose demonstrations puzzle even the mathematician to follow. Kant defends himself in one place by assuming that it is the absence of a popular and entertaining style which causes the *Kritik* to be dipped into and not read; and he has a ready retort against the philosophic student who should demand entertainment.* But the reason lay deeper; and the proof is manifest in the controversies which from the first appearance of the work down to our own day, have been carried on by professed Kantists respecting his meaning. In spite of all the study and all the commentaries, professors of eminence, even in this year 1870, are writing angry pamphlets against each other respecting the interpretation of Kant's views on Space and Time;† and if Germans thus fail, what chance is there for Englishmen and Frenchmen?

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* *Kleine anthropologische Schriften* (Theil vii. p. 5, ed. ROSENKRANZ).

† Zweite Abtheil. p. 89 *sq.* On this subject of SWEDENBORG see the full and interesting discussion in KUNO FISCHER, III. 227 *sq.*

So little *composition* is there in the *Kritik* that a controversy has arisen, and is yet far from settled, respecting the changes in doctrine, as well as in exposition, introduced in the second edition of the *Kritik.* Michelet, Schopenhauer, and Kuno Fischer affirm a radical change; Ueberweg and Mr. Mahaffy affirm complete consistency.*

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* *Prolegomena zu jeder künftgen Metaphysik.* Werke, iii. 172, ed HARTENSTEIN, 1838. This is the edition I cite from, unless when the exception is specially mentioned.

† TRENDELENBURG, the editor of Aristotle and author of the very remarkable *Logische Untersuchungen*, accused KUNO FISCHER, the philosopher and historian, of misunderstanding Kant. Replies followed replies. Comp. KUNO FISCHER's second edition of the work on Kant; TRENDELENBURG's pamphlet: *Kuno Fischer und sein Kant. Eine Entgegnung.* 1869; and FISCHER's pamphlet: *Anti-Trendelenburg. Eine Duplik*, 1870. After this GRAPENGIESSER entered into the fray in a spirited pamphlet: *Kant's Lehre von Raum und Zeit.* Jan. 1870. A stroke of paralysis probably prevented Trendelenburg from continuing the dispute.

Kant never writes well; but he is intelligible in other works, and repulsive only in the *Kritik.* On this account, and on others, the student is advised to leave that work in peace until he has, from other sources, mastered the Kantian principles; which may easily be done by some such course as this: Beginning with Mr. Mansel's *Prolegomena Logica,* and Victor Cousin's *Leçons sur Kant,* he may take in hand Apelt's *Metaphysik,* which reproduces the Kantian ideas in a clear style; he is then fitted for Kant's *Prolegomena,* which is a popular exposition expressly written to make the *Kritik* intelligible.†

§ II. THE CRITICAL PHILOSOPHY.

Defective as a writer, as a thinker Kant was one of the most searching and revolutionary. He produced a deep and agitating impression on the mind of Europe that can only be fitly compared with the French Revolution. Both influences were great and admirable in destruction, without carrying in them the seeds of reconstruction. Both were culminations of anarchical tendencies. Both embodied the results of the travail of centuries. And as the Revolution gave a new aspect to European politics, so Kant gave a new aspect to European Metaphysics. Yet there was nothing really novel in his Method. There was little that was absolutely new in his conclusions.

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* KUNO FISCHER: *Commentary on Kant's Kritik.* Translated by J. P. MAHAFFY, 1866. (This excellent translation of the chapters of FISCHER's work which relate to the *Kritik,* is enriched with acute annotations, and should be consulted by every student of KANT.) UEBERWEG: *De priore et posteriore forma Kantianæ Critices Rationis Puræ,* 1861, and *System der Logik,* 1865.

† 'It describes the way in which Kant reached his discoveries. It shows the whole critical investigation in its natural untrammelled course, and therefore not only shows us but facilitates our view of the inner construction of the critical philosophy.' KUNO FISCHER, *op. cit.* 24. This work, which would be easily intelligible to the English public, has not found a translator, whereas the *Kritik,* on all grounds repulsive, has been several times translated. I shall occasionally avail myself of the version by Mr. MEIKLEJOHN published in *Bohn's Philosophical Library.* (I refer to it as *The Critick of Pure Reason,* sometimes simply the *Critick.*) It is not always accurate, and Mr. MAHAFFY who has examined it, is sometimes severe in condemnation of it; but the enormous difficulty of translating German philosophical language into English equivalents should make us grateful for the effort and reluctant to find fault.

There will be many readers surprised at this statement, especially Germans, and students of German Philosophy. Kuno Fischer, for example, whose opinions I never lightly estimate, and whose History displays great flexibility of judgment no less than comprehensive knowledge, opens his work on Kant with the remark that among all systems none has so little in common with its forerunners as the Kantian. He founded a thoroughly new Philosophy, one which essentially had nothing in common with any predecessor. By this, Fischer means that Kant's object was different from that of all other thinkers, and that his Method was novel. Predecessors regarded Philosophy as an explanation of things, a rationale of the Cosmos. In the course of evolution the particular sciences emerged, each of which gave its explanation of the group of things which it treated of. Science separated itself from Metaphysics, and Experience set Speculation aside, as troublesome, if not futile. From this moment the chief philosophical problem was, What is the relation of Speculation to Experience? which implicitly contained the question: Has Speculation any authority at all in Philosophy not derived from Experience? Leibnitz endeavoured to reconcile the two. He was at once metaphysician and man of science; a master in both; but his physics rested upon metaphysics. His differential calculus originated in his metaphysical law of continuity; his discovery of the measure of force rested on his conception of *vis viva.* The metaphysical bias was so dominant in his system that his scholars separated Speculation from Experience, and the Wolfian School constructed a purely rational Cosmology and rational Psychology.

Then Kant appeared, who regarded the true position of Philosophy to be that of an independent science which stood in relation to all the separate sciences, as these stand to their objects. Thus was the controversy between Science and Metaphysics reconciled. Philosophy, in this view, ceased to be an explanation of things, to become an explanation of our knowledge of things, 'it became a necessary science, since it explained a fact which needed explanation no less than every other fact; at the same time it became a *new* science, for it explained a fact hitherto inexplicable.' The hitherto inexplicable fact being, How is Experience possible? When a physicist seeks the explanation of a physical fact, he seeks the conditions under which it arises, the forces of which it is the outcome. Thus proceeded Kant: he sought the conditions of human knowledge, the forces out of which alone it could arise. His philosophy was everywhere and wholly *critical*; it stood in relation to the *dogmatical* as Optics stands to Vision, as Acoustics to Hearing.

Had not Descartes, Hobbes, Locke, Berkeley, Hume, Condillac also seen that to explain our knowledge, the conditions must be investigated? Fischer is by no means disposed to deny it, but he objects that these were mere efforts, and imperfect efforts, Kant alone chose the right way, and a new way. They placed themselves at the wrong point of view; and no straining of the eye will enable us to see what lies outside the sphere of vision. They fancied they explained the facts of Cognition, but the grounds which they advanced were themselves cognitive. The true standing point was discovered by Kant in the simple truth that if Cognition is to be explained at all it must be through conditions which precede Cognition, and cannot therefore be detected either in Experience or in Reason. This is the egg of Columbus.

Hegel objects to Kant's 'insisting on our learning to swim before venturing into the water.' Fischer properly retorts that Kant's object was not to learn swimming, but to explain it. We can speak without knowledge of grammar; think, without knowledge of logic; see, without knowledge of optics; live, without knowledge of physiology; but are these sciences, therefore, superfluous? And what these sciences are to their objects, the critical science is to Cognition. Hegel's objection is answered; but the dim sense of contradiction which prompted it was grounded on a true feeling of a fallacy in Kant's procedure. Of this fallacy more anon; let us pursue Fischer's exposition.

Bacon, without positively denying that we could know the supra-sensible, assigned to Metaphysics a sort of convent-life removed from Physics, and tended by those sterile virgins, Final Causes. Locke limited knowledge to sensibles. Berkeley followed in the same direction. Hume came to destroy even this ground of certitude. Experience can give no absolute certainty, for all judgments to be absolute must be identical, and no judgment founded on experience can be analytical. Mathematical judgments are true, because analytical; all others are dubious, because synthetical. Kant agrees with Locke that knowledge of things in themselves is impossible, there can be no metaphysic of the supra-sensible. He agrees with Berkeley that all our knowledge is knowledge of phenomena which are only our ideas. He agrees with Hume in the division of judgments into analytic and synthethic; and that all judgments of Experience are synthetic; and that it is impossible to explain either by Experience or Reason how one thing can be the cause of another.

Having thus followed Kuno Fischer through the forty-five pages in which he defends his thesis of Kant's entire originality, I must repeat my assertion that there was nothing new in the Method. The problem he undertook to solve was the problem we have seen constantly presented in modern philosophy: Have we any ideas independent of Experience? The attempts to solve it have been exhibited in the chapters on Locke, Hume, Condillac, Reid, and Gall. All agree in declaring Experience the sole source of ideas; yet since this principle led to Scepticism, there only seemed an escape in Common Sense. Kant declined the refuge of

Common Sense.* While all agreed that Experience was the source of knowledge, he propounded the question: What is Experience? What are its constituents?

It cannot justly be said that Hobbes, Locke, Hume, Condillac, and Reid did not examine into the origin of knowledge, and set forth what they conceived to be the constituent elements of Experience. If Kant proposed a novel theory of these constituents, assuredly the attempt to furnish a theory was in nowise novel; and I cannot accept his statement, which one so often hears echoed, that his conception of a criticism of the understanding was entirely original. To investigate the conditions of Experience had always been the labour of psychologists. To separate the *à priori* from the *à posteriori* elements in knowledge, had been the special industry of Descartes, Leibnitz, and all the upholders of Innate Ideas, Fundamental Laws of Thought, &c. No one had more emphatically than Leibnitz asserted that although knowledge begins *with* Sensation, it is not all derived *from* Sensation; but that in all Experience there is a quota furnished by the mind, and this quota is distinguishable by the character of universality and necessity. While there was in truth no novelty in Kant's undertaking, there was also no novelty in his Method. He followed the old pathway, and, analysing the Mind in its developed forms without going back to the earlier stages of development, wholly missed the true conditions of Experience. This Method is in striking contrast with that pursued by him in his luminous conception of a Cosmology, which has since been worked out by Laplace and others, and has taken its place in science as the Nebular Hypothesis. The problems were strictly analogous: Psychology was called upon to explain how Experience arose, how the Mind in all its varied phenomena, could be evolved out of biological conditions; Cosmology was called upon to explain how the Planetary

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* He said it was the notable invention of modern times whereby the emptiest noodle could place himself on a level with the profoundest thinker. *Prolegomena zu jeder künftigen Metaphysik.* Vorrede.

System arose, whence its movements, why the planets had an elliptical orbit and revolved on their axes, and why the eccentricity of the orbit increased with the distance from the sun, so that the planetary course passed into the cometary — these and all related questions had to be deduced from the mechanical laws discovered by Galileo, Kepler, and Newton. But while the problems were thus analogous, very divergent were the Methods. He wrote a Natural History of the Heavens,* but followed another Method in his attempt at a Natural History of Mind. In the one case he fashions a hypothesis on strictly inductive and empirical data. He starts from the material chaos in which nothing is present beyond the elementary substances, and their primitive forces of attraction and repulsion: out of these substances and these forces, as known to us, he constructs the universe known to us; they are the factors of which the planetary system is the product. The analogous procedure would have been to start from Sensibility with its elementary modes of combination, and show how from these factors the familiar product was evolved. As in the one case nothing but Matter and its two modes of action were to be admitted, so in the second case nothing but Sensibility and its modes of action should have been admitted; this would have given a theory of the conditions of Experience, this would have answered the question: How is Experience possible? which would have answered the question: How are synthetic judgments *à priori* possible? Instead of pursuing such a course, Kant begins by asking what is there which precedes Sensibility, what is there in Experience which is not given in Sense, but is antecedent to it? He might as well have asked with the philosophers of old: And chaos whence?

In a word he pursued the old Metaphysical Method, instead of pursuing the Biological Method. I do not for the present appreciate the value of this procedure, nor of its results, but only point out that his claim to have originated a new inquiry and on a new Method cannot be accepted. The *à priori* elements which he is imagined to have discovered by analysis of Experience, are the familiar Innate Ideas, Laws of Thought, Native Dispositions of the Mind, under new aspects. Here, as elsewhere, his power is displayed; the old conceptions have a new precision, and with it a tenfold value, so that after Kant no one will probably return to the old forms. But his immense power of thought has not been directed by a novel Method, and in spite of his destruction of Metaphysical dogmas, in spite of his own scientific interest and culture, he remains the fountain-head of ceaseless streams and rivulets, pouring deviously into the shoreless ocean of speculation.

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* *Allgemeine Naturgeschichte und Theorie des Himmels, oder Versuch von der Verfassung und dem mechanischen Ursprunge des ganzen Weltgebäudes, nach Newtonischen Grundsätzen abgehandelt.* Werke viii. 217–232.

Before him the majority of philosophers failing to see, or positively refusing to see, that the conditions of Experience must be sought in the conditions of the organism, imagined they should find an explanation simply by interrogating Consciousness as Experience presented it. Kant set himself to isolate the two elements *à priori* and *à posteriori*, in the hope that he might thus analyse what was due to Experience from what preceded it.

On interrogating his Consciousness, he found that neither of the two ordinary explanations would account for the phenomena: certain ideas, such as Time, Space, Causality, etc., could not be resolved into Experience alone: nor, on the other hand, although *à priori*, could they be supposed absolutely *independent* of Experience, being as it were only the *forms* (necessary conditions) of Experience.

In this conception the existence of the two distinct factors is assumed. 'That all our knowledge begins with Experience,' he says, 'there can be no doubt. For how is it possible that the faculty of cognition should be awakened into exercise otherwise than by means of objects which affect our senses, and partly of themselves produce representations (*Vorstellungen*), partly rouse our powers of understanding into activity, to compare, to connect, or to separate these, and so to convert the raw material of our sensuous impressions into a knowledge of objects which is called Experience? In respect of time, therefore, no knowledge of ours is antecedent to Experience, but begins with it. But although all our knowledge begins with Experience, it by no means follows that all arises out of Experience. For, on the contrary, it is quite possible that our empirical knowledge (*Erfahrungserkenntniss*) is a compound of that which we receive through impressions, and that which the faculty of cognition supplies from itself (sensuous impressions giving merely the *occasion*), an addition which we cannot distinguish from the original element given by sense, till long practice has made us attentive to and skilful in separating it. It is therefore a question which requires close investigation, and is not to be answered at first sight—whether there exists a knowledge altogether independent of Experience, and even of all sensuous impressions.'*

Kant compares the revolution he effected in Philosophy to the revolution Copernicus effected in Astronomy. He asks how it is that Mathematics and Physics have been perfected. 'Thales, or whoever he was, who first demonstrated the right-angled triangle, had a luminous conception; for he found that it was not by contemplating the figure before him or deducing its properties from his concept of the figure, but found that it was necessary to bring out these properties constructed by him *à priori*, and that to arrive at *à priori* certainty he must not attribute to the object any other properties than those necessarily deduced from the concept he had formed.' †

Now this, which may be the legitimate process in Mathematics, is not only an illusory process in Physics, but is the process which was actually followed until the advance of the Objective Method came to discredit it for ever. Mathematics is deductive and *à priori*; and it was because the early physicists tried to construct their science on the same *à priori* method that they failed egregiously. Kant, referring to Galileo and Torricelli, affirms that they also proceeded on this Subjective Method. 'They learned that Reason only sees that which it produces according to its own scheme (*was sie selbst nach ihrem Entwürfe hervorbringt*); that it must advance with principles of judgment according to invariable laws *compelling Nature to answer its questions, and not allow itself to follow Nature's lead.*' Reason, in short, is to dictate to Nature as a master, not obey her as a pupil; and Physics, we are told, owes its revolution to this luminous idea! To make Metaphysics a progressive study, he conceived that a similar revolution was necessary. Hitherto men had assumed that knowledge should accommodate itself to external objects; he now proposed to reverse this procedure, and assume that objects obeyed the laws of knowledge.*

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* *Kritik: Einleitung.* (MEIKLEJOHN's trans. p. i.)

† *Kritik: Vorrede zur zweiten Ausgabe*, p. 14.

He calls this system critical, because it is founded on an examination of our cognitive faculties, and compares his point of view with that of Copernicus. And the comparison is in so far just, that instead of constructing our knowledge of the world out of the two factors, Consciousness on the one hand, and the World on the other, he constructed the World out of Consciousness, and our knowledge out of the laws of Consciousness. Nevertheless his attempt to deduce the laws of the phenomenal world from the laws of mind, only gave greater precision to the attempt of Descartes to deduce the world from Consciousness; it was the same as the attempts of Leibnitz and Berkeley in Method; and the *result* was very much the result obtained by Hume, namely, that we can know nothing but our own ideas, we can never know things *per se*. Kant, after analyzing the operations of the mind, discovered indeed certain principles of certitude; but he admitted that those principles could not be applied to things *beyond* the mind; and that all within the sphere of our cognition was no more than phenomenal. He reviews his investigation, and then, declaring that he has gone the round of the domain of human Understanding and measured it exactly, he is still forced to admit that the domain is only an island. Nature has assigned to it invariable limits. It is the empire of Truth; but it is surrounded by a stormy and illimitable sea, upon which we discover nothing but illusions. There, on that sea, the navigator, deceived by masses of ice which appear and disappear successively before him, believing that at every moment he is about to discover land, wanders without repose, guided only by one hope; he is the plaything of the stormy waves, always forming new plans, always preparing himself for new experiences, which he cannot renounce, and yet which he can never obtain.

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* 'Bisher nahm man an, alle unsere Erkenntniss müsse sich nach den Gegenständen richten . . . man versuche es daher einmal, dass wir annehmen, die Gegenstände müssen sich nach unserer Erkenntniss richten.'—*Loc. cit.* p. 17.

To the Sceptic Kant says, 'No: experience is not a deceit; human Mind has its fixed laws, and those laws are true.'

To the Dogmatist he says, 'But this Mind can never know Things *per se.* It is occupied solely with its own Ideas. It perceives only the Appearances of Things. How would it be possible to know Noumena? By stripping them of the *forms* which our Sensibility and Understanding have impressed upon them (*i.e.* by making them cease to be Appearances). But to strip them of these forms, we must annihilate Consciousness—we must substitute for our Sensibility and Understanding, a faculty, or faculties, capable of perceiving things *per se.* This, it is obvious, we cannot do. Our only means of communication with objects are precisely this Sensibility and this Understanding, which give to objects the forms under which we know them.'

To the Dogmatist, therefore, Kant's reply is virtually the same as Hume's. He proves that the Mind, from the very nature of its constitution, cannot know Things *per se.* The question then arises, Have we any other Faculty capable of knowing Things *per se*? The answer is decisive, We have *no* such Faculty.

The difference between Hume and Kant, when deeply considered, is this:—Hume said that the Mind was treacherous, and as such it rendered Philosophy impossible. Kant said that the Mind was not treacherous, but limited, it was to be trusted as far as it went, but it *could* not go far enough; it was so circumscribed that Ontology was impossible.

§ III. THE PRELIMINARY POSITIONS.

Ontology being impossible, Metaphysic reduces itself to the less ambitious yet still important position of the science of the necessary limitations of knowledge. It accompanies all sciences; the 'handmaiden of wisdom,' *die Begleiterin der Weisheit,* Kant names it. To found such a Metaphysic is the object of the 'Critique of Pure Reason.'

Two positions demand special scrutiny, because on them the whole edifice will be found to rest; if they are unsound the fabric totters, if they are indisputable the system is secure. These two fundamental positions are, the distinction between analytic and synthetic judgments; and the distinction between *à priori* and *à posteriori* judgments. They have played a great part in modern Philosophy, and are illustrations of the tendency (already noted in our *Prolegomena*) to confuse questions of Morphology with questions of Anatomy, questions of Metaphysics with questions of Logic. Let us first see Kant's exposition:—

Analytic judgments are those which merely write out and *explain* our experience, but add nothing to our store (*Erläuterungsurtheile*); thus when we say that 'Body is extended,' or that a triangle is 'a figure with three sides,' the judgment is analytic: the attribute of extension being involved in our conception of Body, and the attribute of three-sidedness being involved in our conception of a triangle. But synthetic judgments predicate some attribute not involved in the conception of the object, and they *extend* our experience by this addition (*Erweiterungsurtheile*); as when we say that 'a straight line is the shortest path between two points,' the conception of a straight line not involving that of a shortest path; again, when we say 'all bodies are heavy,' the judgment is synthetic because the predicate 'weight' is not a mere writing out of our conception of bodies, it is something added to that conception.

A priori judgments are those which are not derived from Experience, but belong to the native structure of the mind, which structure is one of the conditions (*Bedingungen*) of Experience, rendering it possible. *À posteriori* judgments are those derived from Experience: that is to say, products of the mind and external objects, the functions of these two coefficients.

A synthetic *à priori* judgment is one which Experience may confirm but cannot originate; as when we say that 'a straight line is the shortest path between two points,' which is a truth independent of Experience, having a necessity and universality which Experience cannot bestow; for although it may show how a straight line is in numerous cases the shortest path, it cannot show that there is absolutely nowhere a shorter path between two points. A synthetic *à posteriori* judgment is one resulting from our experience, as when we say: Gold is ductile, we must already know from Experience that gold is ductile before we can predicate ductility of gold.

Such, in brief, is Kant's teaching. As a logical division, this of analytic and synthetic may have its uses; all well-marked distinctions, even if purely verbal, are aids to thought; but unhappily, like other aids, they become obstacles when their artificial nature is forgotten, and verbal differences are accepted as real. Such seems to me to have been the case here. Kant regards the distinction as the keystone of the arch. He admits that it can have little use elsewhere, but says that in reference to the criticism of human understanding it is indispensable.*

Logically, analytic judgments are concepts, synthetic judgments are the union of concepts. But psychological analysis displays the concept itself as a synthesis, namely as the *integration of perceptions*, or their combination into a whole.*

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* 'Diese Eintheilung ist in Anschung der Kritik des menschlichen Verstandes unentbehrlich.'—*Prolegomena*, § 3, p. 181. 'No subject in modern speculation,' says HAMILTON, 'has excited an intenser interest.'—REID's *Works*, p. 787.

Psychologically, synthetic judgments are only analytic judgments *in the making*: they differ as a problem stated and a problem solved. A synthetic judgment becomes analytic as soon as its elements are integrated. Thus, that 'all bodies are extended' is now an analytic judgment, because now the definition of body includes extension. That 'all bodies are heavy' is equally analytic, equally a mere writing out of our concept of body and its attributes, equally included in the comprehensive definition of body; though it once was an extension of our experience, an addition to the concept. To the physicist, as Trendelenburg remarks, weight is as much a mark of the concept 'body,' as extension is to the mathematician.† Both extension and weight are predicates; the act of predication is the same mental process in one case as in the other. There may be some difficulty in recognising the synthetical nature of the predication where the elements have been so integrated that the proposition has become an identical one; but, let us take another example: 'Fire burns.' Is this analytic or synthetic? To us, with a large experience of fire, the proposition 'fire burns' is analytic—simply a verbal proposition: what we mean by 'fire' is a subject which among other predicates has this of burning; the burning is an integral part of our concept. But to a child, whose experience of fire is less, whose concept includes brightness and form, but not burning, the addition 'it burns' would be as much a synthesis, as the addition of weight to the concept of bodies is a synthesis.

Kant has himself given a similar example. 'Gold is a yellow metal,' is analytic, he says, because 'to know this

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* Compare on this point UEBERWEG: *Logik*, § 83. HEGEL: *Encyklopädie*, § 239. *Logik*, iii. 270 *seq.* TRENDELENBURG: *Logische Untersuchungen*, ii. 237 *seq.* and DELBŒUF: *Logique scientifique*, p. 103.

† TRENDELENBURG: *Logische Untersuchungen*, ii. 240.

I have no need of an enlargement of my experience; my concept of gold containing the elements of its yellowness and metallic nature, I have only to analyse this concept and need not seek further.'* In other words, an analytic judgment is the explication of a definition: it is what old logicians called an *essential*, and Locke a *verbal*, proposition. In the analysis of a whole into its parts, certain parts which had been concealed are brought to light. But this whole is itself a synthesis, and was originally put together. The metallic element was discovered in gold, and, once discovered, once put there, was for ever after kept there. The slow integration of experiences converts what was originally synthetic and inductive, into what is now analytic and deductive. The progress of science consists in the gradual integration of such experiences and the transformation of synthetic into analytic judgments, so that propositions which at first were hypothetical become at last truisms. In the pre-mathematical period the concept of a circle was that of a perfectly round line, or of a space bounded on all sides by a line returning on itself. No one will say that it was a mere writing out of this concept when mathematicians discovered that every point in this line is equally distant from a point in the centre; yet this was, we see, involved in the nature of a circle, though assuredly not in the concept then formed of a circle. *Now* such a judgment is analytic. Further, when mathematicians enlarged their concept by the discovery of another property of circles, namely, that the length of their circumferences is to the length of their diameter in the approximate ratio of 3·14159 to 1, this was a synthesis which rapidly became integrated, and we now see that it is involved in the nature of a circle.

A judgment is *ampliative* only so long as it is hypothetical; no sooner is the proposition proved than there is an end to all increase of knowledge in that direction. To the naturalist the proposition 'All vertebrates are endowed with mind,' is a synthetic judgment only so long as he is in any doubt whether, in the concept vertebrate animal, mind is or is not an integral element of his enlarged experience. But all propositions concerning vertebrates were originally in this state. Decompose the concept, decompose the knowledge out of which that concept emerged, and you will find it a succession of synthetic judgments, which became analytic as each fresh experience was integrated. All judgment is predication, and all predication is synthesis. The predicate is an experience; its subject is also an experience.

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* *Prolegomena*, § 2, p. 178.

Even in the most hypothetical judgment there is always the analytic characteristic, namely, that of its being an elucidation of some element involved in the concept. We never in the most daring flights of hypothesis affirm that vertebrates are vegetables, or that they have planes of cleavage like crystals. Why? Because 'vegetables' and 'crystals' are concepts that cannot be brought under the concept 'vertebrates'—experience and analogy give no indication of any such implication. Whereas 'mind,' or some of the marks by which mind is recognised, can be seen in some of the marks by which a vertebrate is recognised.

Thus judgments are analytic or synthetic at different epochs.* The only tenable distinction is that between verbal and real propositions, and this was drawn by Locke with a precision which leaves little to be desired. Kant, who, as was intimated just now, gave old ideas a novelty by giving them a new terminology, and assigning them a new rank, has not added anything to Locke's chapter on 'Trifling Propositions,' though he regretted its unsystematic exposition.†

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* The Spanish metaphysician, Nieto Serrano, holds a similar opinion. 'En rigor, toda proposicion sintetiza algo, puesto que espresa por medio de la cópula la relacion que hay entre el sugeto y el predicado, y toda proposicion analiza igualmente porque es una fórmula en que aparecen separados y distintos los mismos términos que se relacionan.' (*Bosquejo de la Ciencia Viviente*, Madrid, 1867, p. 44.)

† Locke: *Essay*, B. iv. c. viii. 'There can be no doubt of Kant's originality in discovering for himself this celebrated distinction. Kant was not very deeply read in previous philosophy, but indeed we may well excuse him for not seeing what escaped the terrible erudition of Sir. W. Hamilton. Mr. Webb has shown very clearly that Locke in substance completely anticipated it.' Mahaffy: *note in*

Here is a passage: 'We can know the truth of two sorts of propositions with perfect certainty; the one is of those trifling propositions which have certainty in them, but it is only a verbal certainty, and not instructive. And, secondly, we can know the truth, and so may be certain in propositions which affirm something of another, which is *a necessary consequence of its precise complex idea, but not contained in it:* As that the external angle of all triangles is larger than either of the opposite internal angles; which relation of the outward angle to either of the opposite internal angles making no part of the complex idea signified by the name triangle; this is a real truth, and conveys with it instructive real knowledge.'

On these grounds Kant's first position must be rejected. The distinction on which he insists, whatever logical value may be assigned to it, is not one pointing to a psychological difference that has any bearing on the question of Metaphysic.

Let us now pass to the still more important distinction between *à priori* and *à posteriori* judgments which assumed a new form in Kant's hands.* All cognition was held by him to be uninstructive unless it were synthetical, and unstable unless it were *à priori*, i.e. independent of Experience and the limitations of Experience. The first task of Criticism was therefore to answer this question: How are synthetic judgments *à priori* possible? Which was only a new way of putting the old question: How can we have knowledge independent of Experience?

That all cognitions must be synthetical and *à priori*, Kant grounds on these propositions: 1. Unless synthetical, they

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FISCHER's *Commentary on Kant*, p. 28. A glance at the *Prolegomena*, § 3, p. 182, would have shown both these writers that KANT was fully alive to LOCKE's priority. It is perhaps worth remarking that Sir W. HAMILTON (REID's *Works*, p. 187) considers this 'an almost gratuitous concession,' but Sir WILLIAM in writing that note had so imperfect a recollection of KANT's exposition, that he proposes to substitute the terms Explicative and Ampliative, as less ambiguous, forgetting that KANT had himself so denominated them.

* Diese Frage bildet den eigentlichen Cardinal- und Angelpunkt von Kant's Kritik . . . von der Antwort auf diese Frage hängt das Schicksal der Metaphysik ab.'—APELT: *Metaphysik*, p. 40.

are not real cognitions, they add nothing to our previous store. 2. Unless *à priori*, they cannot be universal and necessary, but only particular and contingent. 3. Unless universal and necessary, they cannot be certainly true.

On these points let the reader remark first that a cognition is truly such when the hypothetical element is removed and the synthetical judgment has become analytical by integration. So long as any uncertainty existed, it was a problem: it is a theorem now the uncertainty is removed. Thus, that 'bodies are extended' is a cognition; the truth may have become a truism in becoming analytic, but it has not ceased to be a cognition.

The second position is more important and equally fallacious. The assumption that if a truth is necessary and universal it must be *à priori*, and cannot have been reached *à posteriori*, is very general, and very false. It has been considered at length in our *Prolegomena*, §§ 66–74, and I need only recapitulate here the results of that discussion. Every truth is necessary, although every proposition is not necessarily true. Knowledge may be contingent, but truth is not. How we establish the truth of a proposition is one thing; how we affirm its necessity when established, another. As soon as we see it to be true, we see its necessity. The truth that 'fire burns' is as irresistible, necessary, and may be made as universal, as that 'the angles of a right-angled triangle are equal to two right angles,' or that $2+2=4$.

Is there any mark by which we can recognise a necessary proposition beyond that which discloses the identity of its terms? Waiving for the present all perturbations among the phenomena, and assuming that we speak only of true propositions, what, I ask, is there to distinguish one truth as necessary from another as contingent? Every proposition affirms that *a thing is what it is*; the truth lies in affirming this much of it and no more; and the Principle of Contradiction insists on our recognising that the thing *cannot be what it is and at the same time other than what it is.* Now, 'universality means that the thing in question, whatever it is, never is otherwise; necessity means that we cannot conceive it otherwise.'* And, as I have abundantly shown, whenever men speak of a contingent truth, they *pre-suppose some possible variation in the terms of the proposition,* whereby the thing will no longer be what it now is. A necessary truth is one expressed by an analytical proposition. Every analytical proposition is true, inasmuch as it is an identical proposition and merely says, 'Whatever is, necessarily is.' The contingency which may hover over any proposition takes its rise in the hypothetical form: '*May* not what *now* is, be otherwise in future?' or '*Might* it not have been otherwise?' The answer is given by a readjustment of the identical proposition to suit the new case. Instead of saying 'whatever is, is,' we say 'whatever must be, must be,' and 'whatever might have been, might have been.' If the result in the future is to vary, it can only vary by a corresponding variation in the conditions.

'The character of universality declares that the matter is so in all cases. The character of necessity declares that the contradictory of the assertion is impossible.' What is this but saying that a necessary and universal proposition is one of which the terms are identical? No judgment affirms that when the *conditions which determine* the thing are altered, the *thing determined* remains unaltered; yet this is the suppressed fallacy of the 'in all cases.' 'But,' it is said, 'human experience can only know *individual* cases. It can never comprehend all the cases; nay more, it is perfectly impossible to know that the known cases are all the possible ones. Even with the greatest number of cases which a rich and extended experience can furnish, its judgments can only have comparative, not absolute, universality. In other words, universality and necessity can *never* be given by experience. That which is given by experience *only* I receive from without; it is in the language of philosophy, a datum *à posteriori,* because it *follows from perception.* That which is *not* given by experience can never follow from experience, and must, if it exist at all, exist independently *before* all experience; it is a datum *à priori.*' *

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* Hodgson: *Time and Space,* 1865, p. 10.

How is this distinction warranted? When I say 'fire burns,' I assert universality and necessity as emphatically as when I say, 'the angles of a right-angled triangle are equal to two right angles;' in both cases I am simply asserting an identical proposition. I do not say 'fire must always burn.' I have not, nor can I ever have, experience of fire in all its possible manifestations; whereas having constructed the triangle, there is nothing in its concept that I have not myself put there, and as I am thereby assured that no new properties will manifest themselves, no variation in the terms of my proposition is possible. But an assertion either about the fire or the triangle, if made universal, does not thereby lose the identity of its terms; if the terms remain *unaltered*, the proposition, in becoming universal, is unchanged. A is A; it is so now; it will be so for ever. In becoming AB, and A subsequently disappearing, leaving B only, the identity of the proposition ceases. If a fire exist which is not hot and does not burn, *that* is not the fire of which my proposition speaks. Thus, the terms of the proposition being altered, the conclusion is altered likewise.

There is this source of fallacy respecting propositions of arithmetic or geometry, that their terms being rigorously defined, and the relations being simple, there is no possibility of a change not at once destroying our intuition. I cannot imagine the triangle to be elsewhere composed of other angles than such as are equal to two right angles, because this would be an inaccurate description of my concept of what I have constructed and named a triangle. Where as an object like 'fire' was not constructed by me, its properties were given in experience; and this concept being complex in its terms and relations, some of these may remain while others are changed, without destroying my intuition of the object. I shall still have an image of the 'fire.' Even when the image is in some respects changed. But although under conceivable conditions the object 'fire' may so far have been changed as not to burn, this in no way affects the universality and necessity of the proposition 'fire burns;' it only leads to the announcement of *another* proposition, namely, 'under certain conditions fire does not burn;' which, if true, is equally necessary. The contingency is not a matter of judgment, but a matter of fact; and the matter of fact reduces itself to this, that the object 'fire' in the one proposition is not the same as in the other. But if it is allowable to change the terms thus, we may make geometrical propositions equally contingent. Everything that is, is necessary: *it* could not have been otherwise. Some *other* event might have occurred in its time and place, but this only on the supposition that *other* conditions were present which determined it. The truths of Geometry stand on no surer basis. We are often told that a physical fact is contingent because no reason can be shown why it should not have been *other* than it is. A fallacy. The reason shown is that the conditions which determined the fact were *what* they were, and none other. No better reason can be shown for a mathematical fact: the angles *are* angles; the straight lines are *not* curves. If any one were to adopt the argument usually followed in respect of physical facts, and were to ask: Why might the straight lines not have been curves? the answer would be: Because in *that* case the angles spoken of would not have existed; instead of angles curves would have existed. Thus in each case we have only to preserve our terms from alteration, and then the transformation of a particular to an universal judgment is simply its unconditional generalisation; just as we produce a straight line indefinitely, so may we enlarge a judgment indefinitely.

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* KUNO FISCHER: *Commentary*, p. 13.

Am I then justified in affirming that 'all baboons have blue noses?' No: only in affirming that 'all blue-nosed baboons have blue noses.' The first is an induction which may be false because it *generalizes conditions*; the second is a judgment which must be true because it is an *unconditional* *generalization*; and here, as I have shown in the *Prolegomena*, lies the true distinction between contingent and necessary truths. The truths of Number and Geometry have a character of peculiar necessity which cannot belong to physical truths, simply because magnitudes are abstracted from all conditions, and their generalization is independent of all possible interference. Kant says, Experience can only teach us that a thing is, and what it is, but never that it is necessarily so, and cannot be otherwise.* This is inaccurate. Experience cannot tell us that the conditions which *make* the thing what it now is, will not elsewhere be changed and make it different, because Experience cannot embrace all possible future conditions; but it can and does tell us, that so long as the conditions represented by the thing remain what they are, the thing will be what it is.

Kant errs on this point in company with all philosophers who have imagined a distinction to exist, which has no psychological foundation, between general and particular judgments. Sir W. Hamilton affirms that the observation of particular cases of causality could never 'have engendered not only the strong but the *irresistible* conviction that *every* event *must* have its causes. Each of these observations is contingent'—[not at all: each is necessary, each carries with it an irresistible conviction of *its* existence]—'and any number of observed contingencies will never impose upon us the consciousness of necessity, that is, the consciousness of an inability to think the opposite. This theory is thus logically absurd. For it would infer as a conclusion the universal necessity of the causal judgment from a certain number of actual consecutions; that is, it would collect that *all must be* because *some are*.'† This is a typical specimen of the logical legerdemain in which metaphysicians delight. It first assumes that every observation of sequence is contingent;

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* *Prolegomena*: Zweiter Theil, § 15, p. 212. 'Nun lehrt mich die Erfahrung zwar was da sei, und wie es sei, niemals aber, dass es nothwendiger Weise so und nicht anders sein müsse.'

† HAMILTON: *Discussions*, p. 588.

but there is nothing whatever contingent in the fact that we observe the sequence; *that* is necessary, we are incapable of thinking it otherwise, incapable of believing that we have not the feeling. It next assumes that no number of particulars can impose a general conclusion; but how are general conclusions established except from their particulars? How do we get the idea of uniformity except from the indefinite prolongation of the special cases—a prolongation which is forced upon us in the absence of any contradictory experiences, i.e. any change in the conditions which would establish diversity? The conclusion is not, therefore, *all must be* because *some are*: but *all must be* because *all are.* Experience corrects our natural tendency to indefinite prolongation, i.e. to conclude that what has once been must always be; it teaches us that what is true in some conditions is not true in others. Every conclusion changes when the terms of the proposition are changed. If—as is undeniable—the particular experience of causation is necessary, and not contingent, inasmuch as we cannot think that the opposite is true now in this particular case; there is equal necessity when we generalize it, and affirm that in *all exactly similar cases* the same truth will hold. Hamilton's mistake is the one generally committed, of silently changing the terms. Hence he says, in continuation, 'logically absurd, it is also psychologically false. For we find no difficulty in conceiving the *converse* of one or all observed consecutions; and yet the causal judgment which, ex hypothesi, is only the result of these observations, we cannot possibly think as possibly unreal.' Now, in what sense can we be said to conceive the converse of each observed fact? We cannot conceive that we have not observed it; we cannot conceive that this A is B. But we, aware of our liability to error, conscious that much in the complex nature of things is hidden from us, can conceive that we have partially observed (and hence the contingency of our judgment), or we can conceive that—under different conditions—

the phenomena might be different. Not having constructed the object, we cannot be sure that our concept embraces all its essential elements. In consequence of this ignorance we can conceive that a stone might rise in the air, although we have always observed it to fall. Does this disturb the legitimacy of our generalization? Not in the least. In the first place the converse of the particular judgment is only reached by an alteration of the terms; *if* the stone rises instead of falling, it is because the air is heavier than the stone and pushes it upward like smoke; one of the terms—i.e. weight of air, or of stone—is altered; the conclusion changes with this change. In the next place, the 'causal judgment' Hamilton has in view is that 'every event must have *a* cause.' This is a different judgment. It is an unconditional generalization of the proposition that an event has an antecedent. Whether originally reached by an induction, from which the various conditions have subsequently been eliminated, is a question which may be debated; but however reached, the necessity of the causal judgment in general is not greater than the particular judgment: 'this event has a cause.'

It is needless to pursue the argument here. Enough has been said to show that the position relied on by Kant (and most other philosophers) respecting the peculiar validity assigned to necessary truths as being *à priori*, and independent of experience, is baseless. Kant is forced to hold that the demonstration of a theorem is only true in the particular instance, and to make it universally true there is need of an *à priori* intuition. But, as an acute writer well remarks, 'If a conclusion from a single instance in empirical intuition can possess only limited validity, how can a conclusion from a single instance in pure intuition possess unlimited validity? In either case the universal is deduced from the particular; what is the difference in the two cases? It does not follow that the theorem is true of all triangles possible to pure intuition simply because it is true of one, unless it equally follows that the theorem is true of all triangles possible to empirical intuition because found true of one triangle.'[*] Kant would have answered this with his constant assumption of the contingency of empirical, and the necessity of pure, intuition. It is this assumption against which the student is warned, if he would not be led astray in metaphysical swamps; we shall consider it more closely by and by.

In the first edition of the *Kritik* we read: 'It is a very remarkable fact that, even with our experiences, cognitions are mixed up which must have their origin *à priori*, and perhaps only serve to supply a connection for our representations of Sense. For even if we remove from our experiences all that belongs to sense, there still remain certain primitive concepts and judgments generated from them which must have originated *à priori* quite independent of experience, because we can, or at least we think we can, assert more of the objects of sense than mere experience would teach us.'

On this it may be remarked that Kant unwarrantably limits experience to Sense, and thus obscures the whole subject; although his own definition of experience, 'a continuous synthesis of perceptions,'[†] implies the existence of an element over and above Sense, namely, that which *combines*; and he thereby implies, in *à posteriori* and empirical cognitions, the operation of that very factor which he declares to be peculiar to *à priori* cognitions. What he means is probably, that even in ordinary empirical knowledge there is the necessary co-operation of virtual conditions, named Laws of Thought, the original data of the mind, which, because they are original data, cannot be affiliated on individual Experience, and must therefore to this extent be *à priori*. But this only cuts the ground from under him. It proves that in *every* act of judgment the mind is moved according to its own Laws, and that these belong to it, and not to the objects of knowledge. In every act? Then in *à posteriori* no less than in *à priori* judgments; consequently the famous distinction between these acts is shown to be arbitrary, and to carry none of the important consequences he deduces respecting the validity of *à priori* knowledge. It proves that *all* knowledge must have an *à priori* element—namely, the virtual capacity of the knowing mind; and an *à posteriori* element—namely, the object given in experience. Knowledge is a function of the two; but the coefficients are not separable in any one particular act. The capacity has no value until it is realized; the law has no existence until it is in act, and in act it is identified with the object.*

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[*] *North American Review*. July 1864, art. on *The Philosophy of Space and Time*.

[†] *Prolegomena*, § 5, p. 188. 'Erfahrung ist selbst nichts Anderes als eine continuirliche Zusammenfügung (Synthesis) der Wahrnehmungen.' In a note to § 22, p. 223, he seems to have been aware of the contradiction, and tries to evade it, not, I think, successfully.

Recurring for a moment to the passage last quoted from Kant, let attention be drawn to the 'cognitions' which are said to be mingled with our experiences; inasmuch as he repudiated Innate Ideas, and inasmuch as his Mental Forms are only virtual conditions of Knowledge, not the Knowledge itself, this confusion of the *conditions* with the *result*—of Forms of Cognition with Cognitions—should have been sedulously guarded against. In his system, however, the confusion is an integral part; many of his deductions would be impossible if the conditions alone were assumed, and not the cognitions which result.

I have interrupted the exposition in order to discuss these topics because of their fundamental importance. If I am correct in concluding that the distinction between *à priori* and *à posteriori* judgments, like that between analytic and synthetic judgments, is a logical distinction without psychological validity, the pillars of the Critical Philosophy* are undermined. Kuno Fischer in tracing the history of Kant's opinions regards this discovery of the *à priori* nature of synthetical judgments as the decisive step to which all previous advances tended; 'by this step he separated himself from Hume, and overthrew scepticism.'

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* I shall presently recur to the impossibility of separating the two coefficients, meanwhile here is a passage from the *North American Review* advocating a view similar to that in the text. 'The laws of Knowledge are *à priori* and absolutely independent of Experience; but knowledge itself, being from its nature the knowledge *of objects and of their relations*, is not possible until the presentation of objects, and is consequently so far dependent on experience. Laws are only known in phenomena; phenomena are only known according to laws; hence every act of knowledge involves both an *object of the act and laws which regulate* the act.'

§ IV. The Sources of Knowledge.

The famous question: How are synthetic judgments *à priori* possible? was a new form of the old question: How can we have any knowledge independent of Experience? Kant answered it, not by assuming the existence of Innate Ideas, but as Leibnitz did, by assuming the existence of certain Forms—certain native conditions which render Experience possible, and which must be *à priori*. He gave a profound impulse to Speculation by his mode of elucidating these Forms; but the very impetus of the movement carried men away from the real path of research, namely, an objective investigation of the psychological mechanism as dependent on organic conditions.

His object was to give a theory of all the pure elements, *à priori*, which enter into knowledge as distinguished from the *à posteriori* elements. He advanced five fundamental propositions:

1. That Experience does not furnish the whole of our knowledge;
2. That what it does furnish has the character of contingency and variability;
3. That the mind also furnishes an element, which element is *an inseparable condition of all knowledge; without it* knowledge could not be;
4. That this element has the character of universality and necessity;

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* Compare Apelt: *Metaphysik*, pp. 41–50. Ueberweg justly characterises them as assumptions which Kant never attempted to prove, and which contain the πρῶτον ψεῦδος of the system. *Grundriss d. Gesch. d. Phil.* iii. 167.

5. And that the principle of all certitude is precisely this universality and necessity.

He set himself to examine the nature of the mind, and to trace the distinctive characters of each element of knowledge, the objective and the subjective. Instead of saying, with the Sensational School, All our knowledge is derived from the senses, Kant said, *Half* of all our knowledge is derived from the senses: and the half which has another origin is *indissolubly bound up with the former half.* Thus, instead of saying with the Cartesians, that, besides the ideas acquired through the sense, we have also certain ideas which are innate, and irrespective of sense; Kant said *all* our cognitions have a double origin, and this twofold co-operation of object and subject is *indispensable* to all knowledge.

The *Critique of the Pure Reason* is an examination of the mind, with a view to detect its *à priori* principles. He calls these *pure* because they are *à priori,* because they are above, and beyond Experience. Having argued that the mind has *some* pure principles—which were never given in Experience, and must therefore be *à priori*—he is led to inquire how many the mind possessed. He does not trouble himself with investigating the nature of perception (had he done so he might have seen the error of his analysis); he contents himself with the fact that we have sensations, and with the fact that we have cognitions whose origin is not sensuous.

What does he discover? First, a Sensibility—a power of being affected by objects; this is what he calls the *Receptivity* of the mind: as such the mind is passive. By this faculty representations (*Vorstellungen*) are intuited. Secondly, he discovers an Understanding (*Verstand*)—a faculty of *knowing* objects by means of the representations furnished by our Sensibility: this is an *active* faculty; in antithesis to Sensibility, it is a *Spontaneity.*

But our Sensibility, although passive in receiving impressions, has its laws of action, its conditions; and, to discover these conditions, we must separate that which is diverse and multiple in our sensations from that which remains invariably the same. The objects are numerous and various; the subject remains invariable. Kant calls the multiple and diverse element by the name of *material;* the invariable element by the name of *form.* If therefore we would discover the primary conditions or laws of action of our Sensibility, we must discover the invariable elements in all sensations.

There are two invariable elements—*Space* and *Time.* They are the forms of our Sensibility. Space is the form of our Sensibility, as external; Time the form as internal.

Analyze sensations of external things as you will, you can never divest them of Space. You cannot conceive bodies without Space; but you can conceive Space without bodies. Space therefore is the indispensable condition of sensation: the Form of external Sensibility. It is not given in the materials of sensation; since you may conceive the objects annihilated, but cannot conceive the annihilation of Space. Not being given in the material, it must therefore constitute the form.

Similar reasoning proves that Time is also the form of our Sensibility, considered as internal. We cannot conceive things as existing, except as existing in Time; but we can conceive Time as existing, though all things were annihilated. Things subjected to our Sensibility are subjected to it in *succession*; that is the form of our Sensibility.

Such then are the two indispensable conditions of all sensation—the two Forms with which *we* invest all the varied materials presented to us. It is evident that these two ideas of Space and Time cannot have been given in the materials, consequently are not deducible from experience; *ergo,* they are *à priori,* or, as Kant calls them, *pure intuitions.*

The forms of Sensibility being those of Space and Time, we now pass onwards to the higher operations of the mind. The function of the Understanding is to judge. It is eminently an active faculty—a spontaneity; and by it the percepts furnished through Sensibility are elevated into concepts (*Begriffe*). If we had only Sensibility, we should have sensations, but no knowledge. It is to the Understanding that we are indebted for knowledge. And how are we indebted to it? Thus: the variety of our sensations is reduced to unity—they are linked together and made to interpret each other by the Understanding. A sensation in itself can be nothing but a sensation; many sensations can be nothing but many sensations, they can never alone constitute concepts. But one sensation linked to another by some connecting faculty—the diversity of many sensations reduced to unity—the resemblances, existing amidst the diversity, detected and united together—is the process of forming a concept, and this is the process of the Understanding, by means of Imagination, Memory, and Recognition.

Our senses, in contact with the external world, are affected by objects in a certain determinate manner. The result Kant calls a representation (*Vorstellung*) in reference to the object represented; an intuition (*Anschauung*) in reference to the affection itself. But this distinction is not always observed. *Vorstellung* sometimes means the image and sometimes the subjective affection. The same equivoque with *Anschauung*. When intuitions are moulded by the Understanding into concepts, the sensation is converted into a thought.

The Understanding is related to Sensibility in the same way as Sensibility is related to external things. It imposes certain Forms on the materials furnished it by Sensibility, in the same way as Sensibility imposed the Forms of Space and Time upon objects presented to it. These forms of the Understanding are the conditions of its operation.

To discover these we must ask ourselves, What is the function of the Understanding?—Judgment. How many classes of judgments are there? In other words, What are the invariable conditions of every possible judgment?—They are four: Quantity, Quality, Relation, Modality. Under one of these heads every judgment may be classed.

A subdivision of each of these classes follows:—1. In judging of anything under the form of *Quantity*, we judge of it as unity or as plurality; or uniting these two, we judge of it as totality. 2. So of *Quality*: it may be reality, negation, or limitation. 3. *Relation* may be that of substance and accident, cause and effect, or reciprocity. 4. *Modality* may be that of possibility, existence, or necessity.

In those Categories* Kant finds the *pure Forms* of the Understanding. They render thought possible; they are the invariable conditions of all conception; they are the investitures bestowed by the Understanding on the materials furnished by Sensibility.

By the Categories, he declares he has answered the second half of the question, How are synthetic judgments, *à priori*, possible? The synthetic judgments of the Categories are all *à priori*.

But the faculties of the mind are not yet complete. Sensibility gives intuitions, Understanding gives concepts, but there is still another faculty—the crowning faculty of Reason (*Vernunft*), the pure Forms of which we have to seek.

Understanding is defined 'the faculty of judging' (*Vermögen der Urtheile*); Reason is the faculty of ratiocination—of drawing conclusions from given premises (*Vermögen der Schlüsse*). Reason reduces the variety of conceptions to their final unity. It proceeds from generality to generality till it reaches the *unconditional.* Every concept must be reduced to some general idea, that idea again reduced to some more general idea, and so on till we arrive at an ultimate and unconditional principle.

Reason not only reduces particulars to a general, it also deduces the particular from the general: thus, when I say, 'Peter is mortal,' I deduce this particular proposition from the general proposition, 'All men are mortal;' and this deduction is evidently independent of experience, since Peter being now alive, I can have no experience to the contrary.

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* On KANT's use of the term categories, see HAMILTON: *Logic*, i. 197–8. On the subject generally, comp. KANT: *Prolegomena*, iii. p. 210; *Anfangsgründe der Naturwissenschaft*, preface, pp. xvi. xviii.; and APELT: *Metaphysik*, p. 132. Then read the exposition in the *Kritik.*

These two processes of reducing a particular to some general, and of deducing some particular from a general, constitute ratiocination.

Reason has three pure Forms; or, as Kant calls them, borrowing the term from Plato, *Ideas.** These are wholly independent of Experience; they are above Sensibility—above the Understanding; their domain is Reason, their function that of giving unity and coherence to our conceptions.

The Understanding can frame certain general concepts, such as man, animal, tree; but these general concepts themselves are subordinate to a still more general Idea, embracing all these general concepts in the same way as the concept of man embraces several particulars of bone, blood, muscle, etc. This idea is that of the Universe.

In the same way all the modifications of the thinking being—all the sensations, thoughts, and passions—require to be embraced in some general Idea, as the ultimate ground and possibility for these modifications, as the noumenon of these phenomena. This Idea is that of an *ego*—of a personality—of a Soul.

Having thus reduced all the varieties of the *ego* to an unconditional unity, viz. Soul, and having also reduced all the varieties of the *non-ego* to an unconditional unity, viz. the Universe, his task would seem completed; yet, on looking deeper, he finds that these two Ideas presuppose a third—a unity still higher, the source of both the world and of the *ego*—viz. God.

God, the Soul, and the Universe are therefore the three Ideas of Reason, the laws of its operation, the *pure Forms* of its existence. They are to Reason what Space and Time are to Sensibility, and what the Categories are to Understanding.

But these Ideas are simply *regulative*: they operate on concepts as the Understanding operates upon sensations; they are discursive, not intuitive; they are never face to face with their objects: hence Reason is powerless when employed on matters beyond the sphere of Understanding. If it attempts to operate beyond this sphere, it can draw nothing but false, deceptive conclusions—if it attempts to solve the question raised respecting God and the Universe, it falls into endless contradictions.

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* Compare Trendelenburg: *Logische Untersuchungen*, ii. 473.

Respecting the illusory nature of Reason, which is often confounded with its delusory nature, I cannot do better than quote Mr. Bolton's correction* of Sir W. Hamilton, who here, as elsewhere, displays a singular misconception of Kant:

'Kant teaches that there is a natural temptation to employ the ideas of Reason illegitimately, owing to a certain natural illusion, termed by him *transcendental illusion*, which disposes us to believe that these ideas, whose right use is purely immanent, can enable us to extend our cognitions beyond the limits of experience. Critical examination shows us that this appearance is illusory, and prevents us from being deceived by it; yet though *delusion* is thus prevented, *illusion* still remains. As examples of illusion thus existing without delusion, Kant instances the appearance of the sea, which seems to be higher at the horizon than near the shore, though we know this is not the case; and again the appearance of the moon, which seems larger near the horizon than near the zenith, though we know both by measurement and by calculation that the appearance in question is illusory.

'These views are expressed by Kant in a great number of passages, of which the following may be quoted:

'The result of all the dialectical attempts of pure Reason not only confirms the truth of what we have already proved in our transcendental analytic, namely, that all inferences which would lead us beyond the limits of experience are fallacious and groundless, but it at the same time teaches us this important lesson, that human reason has a natural inclination to overstep these limits. . . . .

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* BOLTON: *Inquisitio Philosophica: an examination of the Principles of Kant and Hamilton*, 1866, pp. 109 *sq.* Compare also Mr. MAHAFFY'S Introduction to KUNO FISCHER, p. lxiv.

‘Whatever is grounded in the nature of our powers will be found to be in harmony with the final purpose and proper employment of those powers, when once we have discovered their true direction and aim. We are entitled, therefore, to suppose that there exists a mode of employing transcendental ideas which is proper and *immanent*; although, when we mistake their meaning, and regard them as conceptions of actual things, their mode of application is *transcendant* and delusive. . . . . Thus all errors of misapplication are to be ascribed to defects of judgment, and *not to understanding or Reason.*

‘I accordingly maintain that transcendental ideas can never be employed as constitutive ideas, that they cannot be conceptions of objects, and that, when thus considered, they assume a fallacious and dialectical character. But, on the other hand, they are capable of an admirable and indispensably necessary application to objects as regulative ideas, directing the understanding to a certain aim, the guiding lines towards which all its lines follow, and in which they all meet in one point. This point, though a mere idea (focus imaginarius) . . . . serves notwithstanding to give to these conceptions the greatest possible unity combined with the greatest possible extension. Hence arises the natural illusion which induces us to believe that these lines proceed from an object which lies out of the sphere of empirical cognition, just as objects reflected in a mirror appear to be behind it. But this illusion, *which we may hinder from imposing upon us*, is necessary and unavoidable if we desire to see, not only those objects which lie before us, but those which are at a great distance behind us . . . If we review our cognitions in their entire extent, we shall find that the peculiar business of reason is to arrange them into a *system*, that is to say, to give them connection according to a principle.

‘Having thus shown the difference between the illegitimate and the legitimate use of Reason—the former "transcendent," seeking to transcend the limits of experience; the latter "regulative," or "immanent," not overstepping those limits, but seeking to systematise our empirical cognitions —Kant devotes the concluding portion of his work, the Methodenlehre, or doctrine of Method, to an examination of the principles which guide Reason, in its *legitimate* use.

'Such is the real nature of Kant's doctrine; and it is important to set it clearly forth, inasmuch as Sir W. Hamilton has wholly misrepresented it. He represents Kant as teaching that Reason, when *legitimately* exercised, is essentially *delusive*; whence, as he observes, the most pervading scepticism inevitably results; and he represents himself as correcting this erroneous doctrine, by discovering and showing that the antinomies expounded by Kant result only from an *illegitimate* use of Reason.'

§ V. THE DISTINCTION BETWEEN SENSIBILITY, UNDERSTANDING, AND REASON.

The three provinces of human knowledge are presided over by three powers: Æsthetic by Sensibility; Logic by Understanding; and Dialectic by Reason. The two first are constitutive, the third regulative, of Experience. These three provinces are territorial divisions of one country. Are their presiding powers simply three directions of one supreme power, or are they three distinct and autonomous agents? The country, divided into provinces, is Thought; are the ruling powers one Thinking Principle, specially determined under three forms; or are they three separate Principles acting in harmony?

Had the question been put in this decisive shape, there would probably have been such an answer given as would have saved a great amount of misunderstanding and discussion. *It is true that Kant himself is far from clear upon* the point; on what point is he not obscure? Yet had the question presented itself to him, he would no doubt have given it a categorical answer.*

At the close of the Introduction he says: 'There are two stems of human knowledge (which perhaps spring from a single but unknown root), namely Sensibility and Understanding. By the former objects are *given* us; by the latter objects are *thought.*' In this image, knowledge is a tree, the leaves and branches of which may have their origin in one root, or in two roots; although he obviously inclines to the former hypothesis, yet inasmuch as the root itself is unknown, he refrains from pronouncing decisively. Hegel, whose idealism obliterates all real distinctions and admits only the formal, makes Sensibility and Understanding the outer and inner aspect of the one act; and he says, 'Man is always thinking, even when he is intuiting.'† Kant would have said that intuiting is a mental activity, (which is what Hegel means by thought,‡) but whether it is the activity of the same power as that manifested in conceiving, cannot be decided. He would have objected to Hegel that the obliteration of differences was a sin against the canon of discipline which prescribes that varieties are not to be carelessly disregarded: *entium varietates non sunt temere minuendæ.* And certainly the variations between Sensibility and Understanding need recognition, even if both be faculties of Intellect. He somewhere points out the futility of trying to reduce attraction and repulsion to one, on the ground of their both being motion. He would in like manner insist on not reducing Sensibility and Understanding to one, although they are both manifestations of Thought (considered in its widest acceptation). But granting the differences, there might still arise the question as to their origin; whether they were differences of direction merely (*contingent aspects*, as Herbart might call them), or streams from different springs. All that analysis reveals is that the unknown something we call Intellect has three distinctly recognisable characters: Sensibility, Understanding, and Reason; and these are revealed in the distinguishable functions, Intuition, Conception, and Ratiocination. Not only are these manifest in Experience, but they also manifest themselves as *à priori* conditions of Experience. As empirical, we know they are distinct; whether they are so transcendentally, we cannot know.

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* 'The different phenomenal manifestations of the same substance appear at first view to be so very dissimilar, that we are inclined to assume the existence of just as many different powers as there are different effects. . . . We are required by a logical maxim to reduce these differences to as small a number as possible, by comparing them and *discovering the hidden identity which exists.* . . . and the more the phenomena of this and the other power are found to be identical, the more probable does it become that they are nothing but different manifestations of one and the same power.' *Critick of Pure Reason,* p. 328.

† HEGEL: *Encyklopädie,* § 24, p. 48.

‡ Ibid: 'Das Denken, wie es die Substanz äusserlichen Dinge ausmacht, ist auch die allgemeine Substanz des Geistigen.'

One thing it is of importance to keep in view, namely, that whether Sensibility arise from the same root as Understanding, or from another, it is indubitably an essential constituent of Intellect: its functions are mental functions, not bodily functions. What Ratiocination is to Reason, what Conception is to Understanding, that is Intuition to Sensibility. This remark is made to guard against the very general error into which the connotations of the word Sensibility so easily mislead. The senses being bodily organs, and the only organs through which the Mind is affected by objects, there is difficulty in disengaging the purely mental aspect of Sensation from its physical aspect. Yet nothing is more patent than that by Sensibility the mental aspect is alone presented by Kant, when he is speaking of those *à priori* principles which belong to the Pure Reason.*

While no attempt is made by Kant to establish root-distinctions between Sensibility and Understanding, he clearly marks their empirical characters. The one furnishes intuitions, the other concepts. Neither of these faculties has a preference over the other. Concepts without content are void; intuitions without concepts blind. It is as incumbent on the mind to make its concepts sensible, as to make its intuitions intelligible. These faculties are not interchangeable. Understanding is incompetent to intuite; Sensibility is incompetent to think; only by their union can Knowledge arise. Hence the division between Æsthetic, the science of the laws of Sensibility, and Logic, the Science of the laws of Understanding.

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* In numerous passages he marks the distinction between Sensation and Intuition, the bodily aspect from the mental. Let this one suffice: 'In the transcendental Æsthetic we will first isolate Sensibility by separating it from all that the Understanding, through its concepts, thinks therewith, so that nothing but empirical Intuition remains. Secondly we will lop off from this empirical Intuition everything relating to Sensation (*Empfindung*); so that, thereby, nothing will remain but pure Intuition and the mere form of phenomena, which is the one thing that Sensibility can furnish *à priori*.' *Kritik*, p. 61.

Since the Understanding can judge but not intuite, and Sensibility can intuite but cannot judge, a marked distinction in the *direction* of these powers is patent. Yet since the Understanding is forced to rely on intuitions for its material, as Sensibility is forced to rely on the excitation from external objects for its material, and since the action of both these faculties is that of giving form to the material, the *distinction in direction* is accompanied by a *community in nature*; and the question arises: Is this community an identity?

The Mind is, by Kant, regarded as manifesting three Faculties: the Faculty of Cognition, the Faculty of Moral Feeling, and the faculty of Desire: *Erkenntnissvermögen,** *Gefühlsvermögen und Begehrungsvermögen.* As a parallel we may consider the biological conception of Animal Life manifesting the Nutritive Functions, the Sensori-motor Functions, and the Reproductive Functions. The distinctively animal functions of Sensation and Movement may be studied apart, as Kant studies the Cognitive Functions in the *Critique.* Let us try and penetrate his meaning by presenting it in this parallel. We have before us the definite functions, Sensation and Movement. The differences in their phenomena are so obvious that a superficial consideration would pronounce them to be wholly different in origin. Although both are functions of the one organism, they are not only different functions, but imply distinct agents. Physiology, however, reveals that these functions, have a common origin in the Nervous System ; no muscle is moved except on the stimulus of a nerve; no sensation is excited except on the stimulus of a nerve. Quite otherwise would the answer have run, had the question related to two fundamental properties of tissue, instead of two functions. Had we, instead of Sensation and Movement, asked whether Contractility and Sensibility * were of different origin? there could have been no hesitation. Contractility is a property of one tissue; Sensibility is the property of another tissue; and the two properties are no more identical than muscle and ganglion are identical. There may be Contractility without Sensibility; there may be Sensibility without Contractility. Whereas in the animal organism there can be no such separation of Sensation from Movement, the primary condition of both being the same neural stimulus.

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* Also styled *Denkvermögen.* This identification of Cognition with Thought will have to be kept in view during the discussion of Mental Forms.

Regarded in this light, we may say that the common but unknown root for Sensibility and Understanding, is the nervous system. All thinkers are agreed as to the two powers being powers of the one Intellect; the only doubt is whether they are powers as distinct as Sensibility and Contractility, having distinct tissues for their bases; or powers sharing in a common basis which everywhere determines their action, as the neural stimulus determines Sensation and Movement. Kant leaves this undecided, though he inclines to the second view.

The differences in effects presuppose corresponding differences in the causes; and since the phenomena of Sensibility and Understanding are not to be deduced from each other, Kant insists on regarding them as due to different faculties, whether they have or have not a common root.

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* 'Sensibility' here means a physiological property, not the psychological function which KANT treats of.

Movement differs from Sensation, because the one involves muscle, and the other involves the brain: the differences arise from a common impulse in two different directions. In like manner Sensibility differs from Understanding, because the one involves intuitions and the other concepts: the differences arise from a common impulse in two different directions. The divergence of these directions prevents the one from ever replacing the other.

Thus we must regard Kant as teaching *positively*, that Sensibility and Understanding are two mental faculties of equal dignity; and *hypothetically*, that these two faculties have a common basis, which renders their *united action* a necessary condition. They cannot exist apart; they cannot act apart.*

What is their mode of union? Being so different in direction, how do they meet to produce images of things? This is effected by what Kant calls the *schematism*. By this process sensible objects are brought under intelligible concepts. The link between Sensibility and Understanding is the productive Imagination, without which no impression could become an image. 'That the faculty of Imagination,' he says, 'is a necessary ingredient in perception, has not perhaps as yet struck any psychologist. This arises partly from confining the faculty to mere reproduction, partly because it was thought that the senses not only gave impressions but combined them, and so brought images of objects before us.' There is need for some intermediate which shall be at once sensuous or *à posteriori*, and intellectual or *à priori*. Such are Space and Time: on the one side they are *pure*, and homogeneous with the Categories; on the other side they are *sensuous*, and homogeneous with objects, since only through them can objects be perceived. The quality of Time is that of a transcendental *schema*; and the use which the Mind puts it to is the schematism of the pure Intellect. The schema is a product of the Imagination; but must not be regarded simply as an image, which is an individual perception, whereas the schema is the *category as a picture*, the form through which the category is applicable to the phenomenon of sense.

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* This position has an important bearing on the subject discussed in the succeeding section, on the Mental Forms.

The distinction between Sensibility and Understanding is of the utmost importance in the Critical Philosophy, as determining the reach and limits of Knowledge. Leibnitz rested the distinction on confused and clear representations. 'He compared,' says Kant, 'all things with each other simply by means of concepts, and therefore could find only such distinctions as can be found among concepts. He did not see that the conditions of sensuous Intuition contained within them their tests of distinction, because he regarded Sensibility as only a confused kind of representation, not a source of special representation.' He adds that Leibnitz committed the mistake of intellectualizing phenomena, as Locke had sensualized the conceptions of the Understanding. Instead of recognizing two sources which can only present objects in their conjunction, each of these philosophers could see but one source, this was directly applied to things in themselves, while the other faculty had apparently nothing to do but to confuse or rearrange the representations of its rival. The word *intellectualize* may here be explained. In his letter to Herz, Kant defines *Intellectual-Vorstellungen* 'those which are not modifications of the soul through objects,' in other words, those which have not a sensuous basis. Yet since he makes Space and Time *à priori* subjective Forms of the Intellect (though he *calls* them Forms of Sensibility), there seems a manifest contradiction, which is, however, only an ambiguity. Many writers have been misled by it. Schopenhauer and others reproach him with the contradiction of having first expounded these as Forms of Intellect, and then denied them to be intellectual.* The ambiguity is simply this, that while the Intellect is limited to mental operations *irrespective* of any external relations, Sensibility is the union of the internal and external, and has thus the special distinction from all other mental activities of being directly connected with the external world through the medium of the Senses. Locomotion is not less a nervous action because it is also a muscular action. Intuition is not less an intellectual operation because it is also a physical operation. When Leibnitz is said to have intellectualized the sensuous representations, the reproach conveyed is that he disregarded the special distinction of their basis in sense, and regarded them only as less clear than the representations of intellect.

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* SCHOPENHAUER: *Die Welt als Wille und Vorstellung*, 3rd edit. 1859, i. 516, 518 and 525.

I do not pretend that Kant is uniformly consistent in his exposition. The contradictory assertions which abound in his pages have been a source of endless dispute. He is so loose a writer that one may find passages to establish almost any view of his system. Schopenhauer has brought together a series of flatly contradictory positions: but those *in which he shows that Kant, in spite of the* distinction between Intuition and Thought, interpenetrated Intuition with Thought, and Thought with Intuition,* seem to me, apart from some vacillation and obscurity in Kant's own mind, reconcileable on the ground of the community between Sensibility and Understanding, and the necessity of their united action. Schopenhauer says that the conclusion from Kant's principles is, that there would be for us an *intuitable* world, even were there no Understanding. I answer that this conclusion would only be valid on the supposition that Sensibility and Understanding were two disconnected faculties, not on the supposition of their being two inseparably united faculties. It is this latter view which reconciles all the contradictions Schopenhauer brings forward (p. 522) from passages asserting that the Understanding determines Intuition through the Categories.

Let us now pass to the distinction between Understanding and Reason. This couple is marked off from Sensibility by the absence of all direct relations with objects. (Kant does not propound the doubt whether these two faculties have or have not a common root; he probably considered their community self-evident.) Both are faculties of conception; but the concepts differ in kind; the operations differ in kind. The concepts differ in this: those of the Understanding refer to phenomena, and are conditioned; those of the Reason refer to noumena, and are unconditioned. The one is employed on the material furnished by Sensibility. The other deals with objects freed from all possible conditions of Experience or Sensibility. The operations differ in this: Reason employs Ideas alone in the consideration of its objects, and by these determines the Understanding, which then proceeds to make an empirical use of its concepts. The Understanding is thus constitutive; Reason is simply regulative. One gives knowledge, the other orders it.

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* Op. cit. pp. 520-1.

There has been much dispute on this point among the interpreters of Kant. Each party finds its justification in Kant's own statements. While I agree with those who maintain that there is a real distinction between the two processes, one quite as valid as that between Sensibility and Understanding, and accept Mr. Mahaffy's statement that 'the faculty which imposes conditions can hardly be identical with that which advises us to break down and overstep conditions,' I think Kant implies a fundamental identity with only a divergence in direction. Two points of view are presented: in the one we have Knowledge and its conditions; in the other we have the Intellect as a Knowing Faculty.

I. *As Knowledge.*—The world of Sense and the world of Thought are thus distinguishable: the former is variable owing to the variations in the beholders, whereas the latter, which lies at the basis of all phenomena, remains always one and the same.* Had we only Sense and its Intuitions the world would be a perpetual flux of phenomena, in which one thing would never again be recognized, and no generality would be conceived. But having Thought, which is concerned only with generalities, we recognize by it the permanent and essential underlying the variable and accidental. Without a criterion of Truth (namely Necessity and Universality) every man would differ from every other, each being his own standard. All Sense Knowledge is particular; all Rational Knowledge general.

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* *Grundlegung zur Metaphysik der Sitten.*

II. *As a Knowing Faculty.*—But when we investigate the Intellect we find that its three faculties, however superficially distinguishable, are identical in essence; not simply because they have their common ground in the Intellect, as the Intellect has its ground in common with Feeling and Will; but more directly in its constitution as an *à priori* faculty, and in its mode of action as a *regulative* faculty. Kant, indeed, assigns the regulative action specially to Reason. But if we examine closely, we shall find that just as the Ideas are made to regulate conceptions, so are the Categories made to regulate Intuitions,* and so are Space and Time made to regulate perceptions. This identity has been insisted on by many of Kant's critics, in regard to Reason and Understanding, and indeed has been made a reproach; but I am not aware of the extension to Sensibility having been made, though its evidence seems to me irresistible. The function of all three is to give synthetic unity. The function of all three is to give form to material. The only differences lie in the material operated on, and in the consequent products.

Thus, and thus only, can I consistently interpret the phrases which seem so contradictory, in which space is spoken of as a concept, and even as a concept of Reason, *Vernunftbegriff.*† When Kant declares absolute space to be a concept of Reason, is it not that he is considering space as unconditioned; and is he not led to this concept precisely as he is led to the concept of Universe,—the world carried up to the unconditioned,—and the concept of God,—the active Agent of the Universe, carried up to the unconditioned?

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* 'These regulative principles Kant carefully distinguishes from the dynamical principles of the understanding, which he also calls regulative. The latter are regulative of phenomena; the former of experience.'—Mahaffy, p. 270.

† *Anfangsgründe der Naturwissenschaften.*—Werke, viii. 564.

The argument on this section cannot be better summed up than in Kuno Fischer's review of the whole Kritik: 'It had completely surveyed the domain of human reason as far as its cognitive faculties reached, and distinguished its faculties according to their primitive conditions. These faculties were, Sensibility, Understanding, and Reason. Each of these faculties has its original native formative principles, by the co-operation of which scientific knowledge is produced. These principles are, pure intuition, pure concepts of the understanding, and ideas. Each of them contributes, after its fashion, unity and connection. They are distinguished as to *what* they combine. What each of these faculties has combined is its peculiar product. This product becomes the problem of a new connection for another faculty of the human reason. So the product of intuition becomes a problem for the understanding; the product of the understanding for the reason. Intuition connects sensuous impressions, and makes of them *phenomena.* These being the product of our intuition are the object of our understanding. The understanding connects phenomena, and makes of them cognition or *experience.* Experience is the product of our understanding, it is the object of reason. Reason connects experiences, and makes of them a whole, a scientific system, which continually progresses without ever completing itself. Sensuous impressions can only be connected into phenomena by means of space and time; these are the form-giving principles of sensibility. Phenomena can only be connected with experiences by the Categories; these are the form-giving principles of the understanding. Experiences can only be connected into a scientific system by means of Ideas; these are the form-giving faculties, or, more accurately, those which give goal or aim to our reason.'

We have thus Intellect or the Faculty of Cognition, with its three *modes*: Sensibility, Understanding, and Reason. Whether these three Modes are to be understood as three divergent directions of one Force, or three separate Forces, acting independently, may be disputed. Kant is by no means clear on this point. But on one point there can be no dispute, namely, that all three are factors of the Intellect.*

With this result let us now proceed to another topic.

§ VI. The Mental Forms.

It has long been customary in English literature to speak of Kant's *à priori* principles, namely Space and Time, the Categories, and the Ideas, as 'Forms of Thought,' assigning them respectively to Sensibility, Understanding and Reason, which are the three Faculties of the Intellect. This, although sanctioned by Kantists like Whewell, and by erudite philosophers like Sir W. Hamilton, has recently been pronounced a gross perversion of Kant's meaning. A curious and animated discussion on the point occupied the pages of a scientific periodical.† In that controversy I was led to uphold the customary phrase, in spite of its obvious variation from Kant's language, because it accurately expresses Kant's meaning, when translated into English. My opponents argued—quite superfluously, I think—that inasmuch as Kant uses the term Thought only to express acts of Judgment, and sharply demarcates Intuition from Judgment, it was flagrantly erroneous to speak of Space and Time, i.e. the forms of Intuition, among the forms of Thought. And in an *exposition* of Kant such a procedure would have been manifestly erroneous; this, however, I had carefully abstained from; while in an *interpretation* of Kant, translating him into English, I followed the English practice because that seemed correct. For the distinction insisted on by my opponents would, unless very carefully watched, have seriously misrepresented the Kantian system, by denying,—as some indeed seemed to deny—that Sensibility, Understanding and Reason were three Faculties of the one Intellect, three branches of a common tree.

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* Reinhold's completion of Kant's system had its basis here. He found one character in the three faculties, namely, that of being representative. Intuitions were immediate representations, conceptions were mediate representations, and ideas were representations of the unconditioned. The Intellect was thus one Representative Faculty.

† See the various letters which were published in *Nature*, Nos. 9, 11, 12, 13, 14, and 15, in the beginning of this year (1870).

The phrase Forms of Thought is used as tantamount to the Fundamental Laws of Intellect, and is meant to embrace all those *à priori* principles of Pure Reason, which are supposed to be anterior to, and independent of, Experience. Thought is here taken as the supreme genus (Pure Reason), under which range the subgenera, Intuition, Judgment and Reason. Nor is this classification to be impugned because Kant limits the term Thought to Conception. In scientific language the term Animal expresses the supreme genus under which all living beings, exclusive of plants, are ranged; but in ordinary language we distinguish Animal from Man, and sometimes even Animal from Bird, without equivoque. If a biologist insist upon restricting the term Man, so as to withdraw it from the general term Animal, we may follow him when expounding his views; but when we come to interpret his views according to received biological principles, we must speak of Man as an Animal, especially if we can show that in spite of his technical language he meant by Animal all that we mean by it, and that if we denied the animality of his Man, we should be at variance with his principles. It is thus with Kant; he uses Thought in a technical restricted sense, distinguishing it from Intuition. But the current English use of the word expresses all operations of the Thinking Principle, and is tantamount to the common intellectual ground of Sensibility, Judgment, and Reason. For observe, if we are to restrict the term Thought to acts of the Understanding, and affirm 'that the only forms of Thought in Kant's sense are the Categories,' then on like grounds we must deny the term to the acts of Reason, which Kant also separates from Understanding; thus if Intuitions are improperly termed Thoughts, not less improperly are Ideas termed Thoughts. The logical shears which cut away Sensibility also lop off Reason, since neither of these is endowed with Categories. Whereas, if we follow the old phraseology, we find that Kant's Forms of Thought (i.e. pure *à priori* principles) are 1st, Space and Time, which determine intuitions; 2nd, the Categories which determine concepts; and 3rd, the Ideas which determine transcendental rules. By thus placing Space and Time beside the Categories and the Ideas, we classify the whole of those *à priori* principles supposed to constitute the common intellectual furniture not given in Experience—the *intellectus ipse* of the *à priori* school.*

It has been urged indeed 'that the Sensibility, according to Kant, is not spontaneous or active, like the Understanding. The forms then (i.e. the institutions of Time and Space) are not, cannot be, products of the *activity* of any faculty, and therefore cannot be forms of *Thought* in any legitimate sense of the word. Let it be used in the widest sense possible; let it stand for the *active faculty of mind in general*; and then it can be proved that Kant would have refused to refer to it the forms of general Sense, because he denied to general Sense any activity whatever.'† Is not this acute and well-informed writer here misled, as many others have been, by Kant's not very clear language? Kant always speaks of Sensibility as a receptivity in contradistinction to the spontaneity of the Understanding; but does he thereby mean to deny its activity? I think not. As the question involves important consequences, we may pause to consider it. There seems to be a general misconception arising from not distinguishing between the two kinds of action insisted on by Leibnitz, and adopted by Kant: namely, mechanical action, which is excited from without (an *appulse* I have called it), and spontaneous action, excited from within (an *impulse*). The action of Sensibility is always determined from without—it is therefore a Receptivity, a reaction; that of Understanding is determined from within —it is therefore a Spontaneity. 'We apply the term Sensibility,' says Kant, 'to the receptivity of the mind for impressions, in so far as it is in some way affected; and on the other hand we call the faculty of spontaneously producing representations, or the spontaneity of cognition, Understanding.'*

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* 'Die Materie aller Erscheinung ist nur *à posteriori* gegeben, die Form derselben aber muss zu ihnen insgesammt *im Gemüthe à priori bereit liegen.*' *Kritik*: *Transcend. Aesthetik*, § 1, p. 60. 'Space and Time,' says SCHWEGLER, 'are also subjective additions, forms of sensuous perception, and no less native to the mind than the *à priori* notions, the categories themselves.' *Handbook to the History of Philosophy*, translated by STIRLING, 1867, p. 211.

† DR. INGLEBY in *Nature*, No. 45, p. 375.

Now the point we have to settle is that he regarded this receptivity as an activity. This has been made clear in our preceding section, which exhibited Sensibility as one of the modes of Intellectual action, one of the form-giving *à priori* principles. Intuition is the *action* of Sensibility. We must keep in view the fact that Kant is treating of the mental organism, not the bodily organism, and that he expressly defines Sense as a property of the mind.† If the Intellect did not *react through Sensibility* on the impressions of external objects—the forms of this reaction being the *à priori* conditions Space and Time—there would be no meaning in assigning Sensibility as a mental function; no meaning in classing it among faculties of Cognition. But Kant says: 'the impressions of sense give the first occasion for bringing into action the whole faculty of cognition, and for the production of experience, which contain two very dissimilar elements, namely a matter for cognition, given by the senses, and a certain form for the arrangement of the matter, arising out of *the inner fountain of pure intuition and thought*; and these, on occasion given by sensuous impressions, *are called into exercise* and produce conceptions.'‡ Here the activity of intuition and thought is placed on the same level. Again: 'The first question which occurs in considering our representations is, to what faculty of cognition do they belong? To the Understanding or Sensibility?' Can a faculty be conceived without activity? If the sensation is the reception of an impression, there must also be a reaction from within: 'The effect of an object,' he says, 'upon the faculty of representation, so far as we are affected by the said object, is sensation. But that in which our sensations are merely arranged and by which they are susceptible of assuming a certain form cannot itself be sensation.'* The receptivity applies solely to the impressions; the reactivity is that of the 'inner fountain of pure intuition.' It is to be borne in mind that Kant expressly divides Sensibility into two factors: Sensation and Imagination. The activity of the Imagination is undeniable; it belongs, he says, to the transcendental action of the Mind: *ein Grundvermögen der menschlichen Seele, das aller Erkenntniss à priori zum Grunde liegt.*† Indeed it is the very reproach urged by Herbart against Kant's admission of Sensibility as a Faculty, that if this were so, 'there would be laws of its action, but no such laws are discernible.'‡

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* *Critick of Pure Reason*, p. 45. Compare the opening paragraph of the *Transcend. Aesthetik.*

† 'Vermittelst des äusseren Sinnes (einer Eigenschaft unseres Gemüths), stellen wir Gegenstände als ausser uns vor.'—*Kritik*: *Transcend. Aesthetik*, § 2, p. 62.

‡ *Critick of Pure Reason*, p. 72.

If the Sensibility is *distinguished* from the other faculties by its receptivity of impressions, not only those made on the outward Sense by objects, but also those made on the inward Sense by the play of thought (*Gedankenspiel*), it is not less *identified* with the other faculties by its form-giving action on the impressions. Were it purely passive, did it not react on impressions, clutching them in its grasp and *impressing on them its forms*, sensations would be the mirror-like reflections of objects, and there would be no mental reconstructions, except those effected by the Understanding. But this would be an upsetting of the whole Kantian system. It would destroy his distinction between thing *per se* and phenomenon. It would present all the elements given in Sense as elements of things *per se*. Space and Time would no longer be subjective conditions impressed on objects, but objective conditions impressed on the subject. Sensibility would no longer be a recipient, but a mere receptacle.*

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* *Critick of Pure Reason*, p. 21. † See the first ed. of the *Kritik*, pp. 642, 656.

‡ HERBART: *Psychologie als Wissenschaft*, 2. Theil, § 125.

Let me admit, however, that it is not quite certain whether Kant foresaw the reach of such an interpretation. The connotation of the terms Receptivity and Sensibility may have misled him, as they seem to have misled many German and English writers. If we turn to his *Anthropologie* for an elucidation, this is what we read: 'As respects the state of Representation my mind (Gemüth) is either *active* and exhibits *power* (*facultas*), or it is *suffering* [passive] and consists in *graspingness* (*Empfänglichkeit, receptivitas*). A cognition contains both bound in one. . . . Representations in respect of which the mind is suffering, through which therefore the subject is *affected*, belong to Sensibility; those, however, which contain merely an *action* (thought) belong to the intellect. The former has the character of *passivity*.' †

No language seems plainer, and it reads like a complete reversal of the position I am maintaining. It is on the strength of such language here, and in some other places, that I made the qualified assertion respecting his views. Convinced as I am that a consistent Kantist cannot maintain Sensibility to be distinguishable from Understanding by the simple character of inactivity as opposed to activity, but only by the character of receptivity as opposed to spontaneity, I am doubtful whether Kant himself may not have understood his language in the sense which some of his readers have adopted. The question is not easy of answer, for Kant, as Mr. Mahaffy truly remarks, although a very technical is by no means an accurate writer; and although in the present case his words seem unequivocal enough, it is eminently probable that they misrepresent his meaning.‡ Let us try if we cannot interpret them according to the Kantian doctrine.

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* SCHELLING, in his critique of COUSIN, reproaches him with overlooking this 'activity, which unconsciously transforms an impression into a representation,' COUSIN only admitting the activity of voluntary attention. FICHTE also expressly teaches that passivity (*Leiden*) is only a quantum of activity. *Wissenschaftslehre*, p. 70, 101.

† *Anthropologie*, 1. Theil, § 7, p. 137.

‡ Since this was written, I have met with a striking confirmation of the correctness of my interpretation of KANT; and it is the more valuable, because

Sensibility is receptive, and as such passive. Does this mean that Sensibility in itself is not an agent in mental operations, that it is inactive? No. Sensibility is one of the organs of the Intellect through which things are grasped. It is distinguished from the other mental organs in having a bodily organ (Sense) as the immediate condition of its action. Because, under their more familiar aspect, the senses are regarded solely as bodily organs, their action as physiological, and in this are discriminated from Thought, which is mental function, there is a general disposition to regard Sensibility as essentially opposed to Thought. Yet until bodily actions become psychical they are not sensations, in the true significance of the term. Sensations are naked impressions until clothed in mental forms, when they are intuited. Intuition is the *action* of intuiting. All sensations must be represented under the forms of Space and Time, these being the two supreme genera or conditions rendering physical sensation possible as psychical sensation.

Since therefore we have in Sensibility a psychical side—the pure *à priori* forms—and a physical side, the bodily organs,—we may understand how it is passive in reference to the bodies which act upon it, and active in reference to the

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not only will the interpretation seem paradoxical to most students, but a doubt is permissible whether Kant himself held the view attributed to him as a necessary part of his doctrine. In such a case, it is decisive when we find Kant's earliest illustrious disciple, REINHOLD, expounding the Kantian doctrine of Intuition precisely as I have interpreted it. REINHOLD limits receptivity to the *matter* of a representation; its *form* is given by the activity of the faculty—'apprehension,' he calls it: 'sie ist die erste Handlung des formgebenden Vermögens, der erste und geringste Grad der Spontaneität.'—(*Neue Theorie des menschlichen Vorstellungsvermögens*; III. Buch: *Theorie der Sinnlichkeit*, p. 359).

On the other hand it must be admitted, that another disciple of Kant suggests this very interpretation as an improvement. In his *Neue Kritik der Vernunft*, FRIES says that Kant's phrase, 'the forms of sensibility,' is ambiguous; since it may mean either that Space and Time are the forms which Sensibility *has*, or that they *are* the forms which spring from Sense; the second is the correct meaning, according to FRIES, for the form which Sensibility *has* is not Space, but rather the pure Intuition — our mathematical intuitive faculty. This *Anschauungsvermögen* is erroneously styled a receptivity. Its receptivity consists in its excitability. But the intuition itself, *Das Anschauen*, is spontaneity. So diversely may KANT be interpreted by disciples.

soul which reacts. The necessity it is under of being stimulated by things before its reactivity is called out—there being only the bodily organs of Sense as the direct medium of communication between things and the soul—is characterized by the term Receptivity. It must be borne in mind that Kant applies the term Receptivity to the Inner Sense no less than to the bodily Senses; and 'when the Ego beholds itself, intuits itself, the Ego is passive, and suffers, inasmuch as it is directly affected through the play of thought' (*leidet sofern er durch sein eigenes Gedankenspiel afficirt wird*).* Now no one will venture to question the activity of the Ego. The Receptivity of Sense, as we have over and over again declared, is simply the necessity of direct presentation of the object. But as this necessity does not exist for the Understanding which simply acts by conjoining the elements furnished through Sensibility, the term Spontaneity is applied as distinguishing the synthetic activity of Judgment. 'This,' Kant says, 'is of all Representations the only one that cannot be given through objects, but can only be arranged by the subject itself because it is an act of its spontaneity.'†

Having thus established the precise meaning in which we are to understand the application of the distinction between Receptivity and Spontaneity, characteristic of Sensibility and Understanding, we may now examine in what respect Intuition can be regarded as Thought,—not in the Kantian acceptance of the term, but in the ordinary English acceptance of it. Kant's phraseology may all the more be disregarded since he himself constantly violated it. Although emphatically declaring that Space and Time are intuitions, and not concepts, it has already been noted that he also speaks of them as concepts, and even says that he has 'succeeded in distinguishing and isolating the *pure elementary concepts of Sensibility* (Space and Time) *from those of the Understanding*.'‡

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* *Anthropologie*, § 23.

† *Kritik*: *Deduction d. r. Verstandesbegriffe*, § 15, p. 128.

‡ *Prolegomena zu jeder künftigen Metaphysik*, § 39, p. 244: 'die reinen Elementarbegriffe der Sinnlichkeit (Raum und Zeit) von denen des Verstandes zu unterscheiden und abzusondern.'

We will first show that he regarded Intuition as an intellectual power, *Seelenkraft.* In his letter to Herz of June 7, 1771, he speaks of the importance of discerning clearly the difference between objects and the subjective principles of the forces of the human mind, not those of Sensibility alone, but also those of Understanding ('was auf subjectivischen Principien der menschlichen Seelenkräfte, nicht allein der Sinnlichkeit, sondern auch des Verstandes beruht'); and in many passages he speaks of it as an *Erkenntnisskraft.* Now a force that is not active, an intellectual faculty that is not a thinking faculty, is a *contradictio in adjecto.*

We will next show that, however it may vary from the Kantian terminology, the phrase Forms of Thought correctly expresses in English the Kantian meaning. No one, who has followed us through the preceding section, can have a doubt on the matter; but we may not unprofitably show that so eminent an expositor as Kuno Fischer adopts a similar view. We have already quoted him as setting forth the community of the three faculties; let us now consider the following passage: 'Space and time are the primitive operations of the intuiting Reason—*die ursprünglichen Handlungen der anschauenden Vernunft*—the Categories are the primitive operations of the pure understanding.'* Two points are noticeable: 1. That Intuition is expressly named an operation. 2. That it is an operation of Reason. As an operation, he calls attention to its distinction from an innate idea. Intuitions and judgments are not innate as Descartes and Leibnitz supposed, but primitive operations, necessary functions. 'As mathematical quantities only come into existence, by being intuited or constructed, so the pure concepts only exist when they are thought.' A few pages further on, Fischer says: 'The Intuition produces the form, the sensation produces the content of a phenomenon. The form of every phenomenon is *à priori*; the content is given as a sensuous datum from without, that is to say not produced by the Pure Reason, and hence *à posteriori.*'

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* Kuno Fischer, iii. 381.

Fries remarks on the unfortunate ambiguity in the words ending in *ung*, such as *Anschauung*, *Vorstellung*; which exists also in our English words ending *ion*, as Sensation, Action, &c.; they signify both the acting and the act, the mind feeling and the object felt. Intuition is Beholding; considered subjectively, it is a mental operation; objectively, it is the product of that operation, the Beheld. Time and Space may therefore be considered as pure forms of the mental operation Beholding; or as products of that operation. In the one case they are transcendental, in the other empirical. Just as we speak of Sensation in general, and of particular sensations, so Kant speaks of Intuition as the general faculty, and of intuitions as the acts and products of that faculty.* We sometimes hear it asserted that Space and Time are Forms, consequently neither acts nor products. Are they not both? As pure Forms they are simple Possibilities; as Intuitions they are acts; and as Concepts (*Begriffe*) they are certainly products. It is a mistake to suppose because Space and Time are pure forms which exist ready made, so to speak, and *à priori* in the mind, that therefore the mind is not active *through* these forms, *under* these conditions. In no case can we escape the admission of the mind as active, when it passes out of the potential into the actual condition, and the pure forms which Kant assumes as ready-made are only potential. On this point we shall have to enlarge in criticising the *Critique*.

We now come to the second point in Kuno Fischer's

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* 'Time and Space are not simply forms of sensuous Intuition, but Intuitions themselves (which contain a manifold), consequently represent this manifold in the determination *à priori* of the unity.' KANT adds in a note: 'Space represented as an object (*Gegenstand*) such as Geometry requires, contains more than the simple form of Intuition, namely, the *comprehension* of the manifold in an *intuitive* representation, according to the Form of Sensibility, so that the *Form of Intuition* simply gives the manifold, but the *formal Intuition* gives the unity. This unity I had only assigned to Sensibility, in the *Aesthetik*, to indicate that it is antecedent to all concepts, although indeed it *presupposes a synthesis which does not belong to the senses*, through which alone, however, all concepts of Space and Time are rendered possible.'—*Kritik:* 'Deduction d. r. Verstandesbegriffe,' § 26, p. 147.

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sentence: Intuition is said to be an operation of Reason. On a superficial view this seems a perversion of Kant, not less monstrous than the speaking of Space and Time as Forms of Thought. And it is so; not less monstrous; not more; for there is no perversion in either case. The ambiguity is in both cases similar. Kant uses the term Reason with two very different meanings: in the one it signifies the general faculty which contains all the principles of cognition; in the other it signifies the particular faculty which contains only the regulative principles. It is both the supreme genus, usually spoken of as Pure Reason, and the subgenus, Vernunft, having a co-ordinate rank with Sensibility and Understanding. In like manner English writers use the term Thought as the supreme genus containing all activity of the Thinking Principle; and as the subgenus containing only combinations of ideas, apart from emotions and sensations. Thought in the abstract always means mental activity in the abstract; and the phrase Forms of Thought was applied to Space and Time, *not* because Intuition furnishes the matter to Thought (in Kant's sense)—and forms of Intuition must therefore indirectly be forms of Thought—but because Intuition equally with Judgment is a mental function, and as such is Thought.

I endeavoured to make this clear in the Letters published in *Nature*; but my opponents were unconvinced, and I can only hope that the result of the foregoing discussion will be more successful. One point more is all that need be noticed. It cannot be passed over without slighting the challenge of one who deserves respect. In my Letters I had explained the Kantian meaning of Intuition to be that of a mental function, differing from Judgment as intuitive thought differs from discursive thought. Dr. Ingleby therefore declared the main issue between us to be this: 'Did Kant mean that man has Intuitive Thought?' And this question Dr. Ingleby emphatically negatives. Nor can I impugn his denial, seeing that he declares that he limits 'Thought as the genus of which Understanding and Reason are the species.'* I must first remark that such a restriction is simply begging the question against an adversary who avowedly included Intuition under the genus, *beside* Understanding and Reason. Not to insist on this, let me answer Dr. Ingleby's question, by first asking: Is it correct, in English, to speak of forms of Reason as forms of Thought? If this be admitted—and it must be admitted unless general usage be made to give way to particular interpretations—the question in which he expresses the main issue may be thus put: Did Kant mean that man has Intuitive Reason? The answer is unequivocal. In his chapter on the Discipline of Pure Reason, Kant declares that he has 'attempted to show the great difference which exists between the *discursive employment of reason* in the sphere of conceptions and its *intuitive exercise* by means of the construction of conceptions. . . All our knowledge relates finally to possible intuitions, for it is these alone that present objects to the mind. An *à priori* or non-empirical conception contains either a pure intuition —and in this case it can be constructed—or it contains nothing but the synthesis of possible intuition, which was not given *à priori*. In this latter case it may help us to form synthetical *à priori* judgments, but only in the discursive method of conceptions, not in the intuitive by means of the construction of conceptions.'†

It is not to vindicate the use of a phrase by others and myself that I have entered on this digression, but to bring out by means of it some obscure and ill-understood points in Kant's teaching. So little importance do I attach to the phrase 'forms of Thought' that henceforth I shall avoid it; not because it improperly expresses Kant's meaning, but because writers like Prof. Sylvester, Dr. Ingleby, Prof. Huxley, and Mr. Monck have misinterpreted it into a perversion of Kant's meaning; and as it is eminently desirable not to add to the already large amount of equivocal phrases current, may we not replace Forms of Thought by Mental Forms, and thus escape the danger?

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* *Nature*, No. 14, p. 361.

† *Kritik*, p. 543. The passage is quoted from Mr. MICKLEJOHN's translation, p. 438. The propriety of KUNO FISCHER's phrase is thus evident, as also that of Mr. MAHAFFY, p. 248, 'Reason only intuites through space and time.'

§ VII. RESULTS REACHED.

Reviewing the exposition of Kant's doctrine, we are landed in the conclusion that knowledge is, in its very constitution, purely subjective, *ergo* relative. To attempt to transcend the sphere of Consciousness is vain and hopeless; nor is it wise to deplore that we are 'cabin'd, cribb'd, confined' within that sphere from which we never can escape. As well might the bird, when feeling the resistance of the air, wish that it were *in vacuo*, thinking that there it might fly with perfect ease. Let us therefore content ourselves with our own kingdom, instead of crossing perilous seas in search of kingdoms inaccessible to man. Let us learn our weakness.*

FIRST RESULT.—A knowledge of things *per se* (*Dinge an sich*) is impossible, so long as knowledge remains composed as at present; consequently Ontology, as a science, is impossible.

But, it may be asked, if we never knew noumena (*Dinge an sich*), how do we know that they exist? The answer is simple: Their existence is a necessary postulate. Although we can only know the appearances of things, we are forced to conclude that the things exist. Thus, in the case of a rainbow, we discover that it is only the appearance of certain drops of water: these drops of water again, although owing their qualities to our Sensibility, nevertheless exist. They do not exist *as* drops of water, because drops of water are but phenomena; but there is an unknown something which, when affecting our Sensibility, appears to us as drops of water. Of this unknown something we can affirm nothing, except that it necessarily exists because it affects us. We are conscious of being affected. We are conscious also that that which affects us must be something different from ourselves. This the law of causation reveals to us.

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* Compare the fine passage at the close of the Introduction to the *Kritik*.

A phenomenon, inasmuch as it is an appearance, presupposes a noumenon—a thing *which appears*,—but this noumenon, which is a necessary postulate, is only a negation to us. It can never be positively known; it can only be known under the conditions of Sense and Understanding, *ergo* as a phenomenon.

SECOND RESULT.—The existence of an external world is a necessary postulate, but its existence is only logically affirmed.

From the foregoing it appears that we are unable to know anything respecting things *per se*; consequently we can never predicate of our knowledge that it has objective truth.

But our knowledge being purely subjective and relative, can we have no certainty?—are we to embrace scepticism? No.

THIRD RESULT.—Our knowledge, though relative, is *certain*. We have ideas * independent of experience; and these ideas have the character of universality and necessity. Although we are not entitled to conclude that our subjective knowledge is completely true as an expression of the objective fact, yet we are forced to conclude that within its own sphere it is true.

FOURTH RESULT.—The veracity of consciousness is established.

FIFTH RESULT.—With the veracity of consciousness, is established the certainty of morals.

It is here we see the importance of Kant's analysis of the mind. Those who reproach him with having ended, like Hume, in scepticism, can only have attended to his *Critique of the Pure Reason*, which certainly does, as we said before, furnish a scientific basis for scepticism. It proves that knowledge is relative; that we cannot assume things external to us to be as we conceive them: in a word, that Ontology is impossible.

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* Here we see the effect of confusing cognitions with conditions of cognition. It is not ideas that are independent of experience, but the organic conditions on which ideas depend.

So far Kant goes with Hume. This is the goal they both attain. This is the limit they agree to set to the powers of the mind. But the different views they took of the nature of mind led to the difference we before noted respecting the certainty of knowledge. Kant having shown that consciousness, as far as it extended, was veracious; and having shown that in consciousness certain elements were given which were not derived from experience, but which were necessarily *true*; it followed that whatever was found in consciousness independent of experience, was to be trusted without dispute.

If in consciousness I find the ideas of God, and Virtue, I cannot escape believing in God, and Virtue. This belief of mine is, I admit, practical, not theoretical; it is founded on a *certainty*, not on a *demonstration*; it is an ultimate fact, from which I cannot escape—it is not a conclusion deduced by reason.

The attempt to demonstrate the existence of God is an impossible attempt. Reason is utterly incompetent to the task. The attempt to penetrate the essence of things—to know things *per se*—to know noumena—is also an impossible attempt. And yet that God exists, that the World exists, are irresistible convictions.

There is another certitude, therefore, besides that derived from demonstration, and this is moral certitude, which is grounded upon belief. I cannot say, 'it is morally certain that God exists,' but I must say, 'I am morally certain that God exists.'

Here comes into play the operation of what Kant calls 'the intelligible character.' What is that? It is that which is not and cannot be an object of the senses, not a phenomenon. If an object which is a phenomenon when under the conditions of Sense and Understanding, possesses in itself a faculty not sensible, yet capable of affecting sense, this faculty, or this *causality*, may be regarded under two aspects:

under the *intelligible* aspect in which its action *per se* is presented, and under the *sensible* aspect in which its sensuous effects are presented. ' For as phenomena not being things *per se* must have a transcendental object for their basis, there is no reason why we should not ascribe to this object, in addition to the property by which it appears in effect, a causality which does not appear.' In other words, the causality must have a cause, and this cause is *intelligible* only, not phenomenal. Since every cause must have a *character*, without which it would not be cause, the phenomenal causality is its empirical character; the noumenal is its intelligible character. Whatever is true of empirical causality must be false of intelligible cause. In phenomenal causality everything is subject to Time, succession. But the intelligible cause is free from all conditions. In a world removed from the sensuous restrictions of Time, no action begins or ceases, no action is determined by an antecedent. In such a world nothing happens, there is nothing which requires dynamical determination, and for the same reason no nexus between phenomena. 'It would be quite correct to say that the subject originates its effect in the sensible world from itself, spontaneously, although the action does not begin in itself.' In one word, this is the region of pure Freedom, which transcends the region of Necessity, or the phenomenal world.

It is this idea of Freedom which forms the basis of Kant's *Critique of the Practical Reason*, an investigation into the Reason, no longer as purely theoretical, but as practical. Man is a being who acts as well as knows. This activity must have some principle, and that principle is *freedom of will.*

As in the theoretical part of Kant's system we saw the Suprasensible and Unconditioned presupposed as existent (under the name of things *per se*), but not susceptible of being known or specified; so in this practical part of the system we find the principle of Freedom altogether abstract and indeterminate. It realises itself in acts.

In the very constitution of his conscience, man discovers the existence of certain rules which he is imperatively forced to impose upon his actions; in the same way as he is forced by the constitution of his reason to impose certain laws upon the materials furnished him from without. These moral laws have likewise the character of universality and necessity. The idea of virtue never could be acquired in experience, since all we know of virtuous actions falls short of this ideal which we are compelled to uphold as a type. The unalterable idea of justice is likewise found, *à priori*, in the conscience of men. This indeed has been denied by some philosophers; but all *à priori* truths have been denied by them. They cite the cruel customs of some savage races as proofs that the idea of justice is not universal.* Thus, some tribes are known to kill their old men when grown too feeble; and they test their strength by making these old men hold on to the branch of a tree, which is violently shaken, and those that fall are pronounced too weak to live. But even here, in spite of the atrocity, we see the fundamental ideas of justice. Why should they not abandon these aged men to all the horrors of famine and disease? and why put them to a test? Look where you will, the varied customs of the various nations peopling the earth will show you different notions of what is just and what is unjust; but the *à priori* idea of justice—the moral law from which no conscience can be free—*that* you will find omnipresent.

Out of this moral law the Practical Reason deduces a regulation of society. One might object indeed to it that there is a manifest contradiction in deducing practical conclusions from a premiss which is confessedly unknowable. So far from practical guidance needing the inspiration and the sanction of motives drawn from a source which is above and beyond Experience, it is precisely in practical life that the guidance of Experience is sufficient and felt to be so. Only speculative restlessness requires better bread than can be made of wheat. But Kant, aware of the all-shattering force of his critical principles, and dreading for others, if not for himself, the destruction of all Theology and theological Ethics, which the logical application of these principles necessarily effected, tried to rescue men from practical scepticism, and not content with the only alternative open to him, namely, to set aside the speculative basis altogether, and rely solely on Experience, he attempted to justify on speculative grounds the conclusions which speculation repudiated. He boldly raised a structure upon a basis which he had shown to be the negation of all knowledge; and thus followed the metaphysical procedure so happily expressed by Royer Collard, *de puiser l'ignorance à sa source la plus élevée.*

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* Kant alludes to Locke.

§ VIII. CRITICISM OF THE 'KRITIK.'

Although the foregoing exposition has only included the chief positions of the Critical Philosophy, it will serve perhaps both as an introduction to the study, and an indication of the contribution to History which that system made. In pursuance of our plan we must now scrutinise the value of that contribution. The distinction between Analytic and Synthetic judgments, and the assumption of universal and necessary judgments being only attainable *à priori*, we have already seen reason to reject; yet as these are the foundations on which the whole system rests, it may be desirable to enforce our rejection by showing that not only does Experience furnish judgments universal and necessary, but that the attempt to derive them from any other source is chimerical and without a basis.

First let us understand what Experience includes. I have already (*Prolegomena*, § 59) noticed Kant's unwarrantable restriction of it to mere sensation. Only on such a restriction is his argument tenable for a moment. Yet he himself often uses Experience as the product of sensation and ratiocination;* which is all we claim as a ground for our discussion. If therefore by Experience we mean the sum of the mental modifications, it is clear that since necessary and universal judgments are found among those modifications, and cannot be found apart from them, they also must belong to the domain of Experience. When the advocates of the *à priori* existence of such principles appeal to the universality and necessity of certain judgments as irresistible proof of their being beyond the reach of Experience, they commit a double oversight: they overlook the fact that these judgments are generalizations from experience; and they overlook the fact that the universality and necessity are only applicable to the phenomenal world. When I say that an axiom or a mathematical proposition is necessarily true, and true in all times and places, what ground have I for this assertion, except that I am compelled to think so, cannot think otherwise, even when extending the proposition beyond the range of my experience? But this compulsion is subjective; it is the constitution of my mind which forces me to think a certain proposition in a certain way, and no other. I do not know that in other worlds, and under other conditions, the straight line will be the shortest path between two points; for I know nothing of other worlds. If I am compelled to think this proposition it is because it expresses *all* the presupposed mathematical elements. I am equally compelled to think that every son must have had a father and a mother. In other worlds men *may* be spontaneous products of 'equivocal generation.' I do not know what may be or may not be. I do not therefore assert the universality and necessity of the *conditions*; but I nevertheless assert the universality and necessity of every identical proposition; so long as its terms remain unaltered, any particular proposition must be universally true. I do not assert that every man *must* have had a father and mother ; I assert that every *son* must. I cannot conceive it otherwise, because this expresses all my experience. I cannot conceive ' son ' otherwise than in relation to 'parents,' because this is what the terms express : the proposition is identical.

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* BONA MEYER remarks truly on this point, that KANT not seldom, where he speaks of Experience, has chiefly in view the sensuous aspect of this twofold product; and it then means no more than our perception of the external phenomena of bodies and the internal phenomena of our minds; and from this Experience, *à priori* concepts cannot be derived.—*Kant's Psychologie dargestellt und erörtert*, 1870, p. 161.

Kant says with emphasis—and his whole system is an illustration of it—that all knowledge begins in Experience, that no ideas have reality except in as far as they reflect Experience. The logical conclusion would be that all judgments, even the universal judgments, must be products of Experience. But he says, No ; although all knowledge begins with Experience it is not all *derived* from it. Over and above the Experience there are the conditions which render it possible, and which give it determinate directions. These conditions he considers *à priori* ; the products are *à posteriori.*

Perverting the Aristotelian and Scholastic use of these terms, which made *à priori* judgments *ex causis* —and the *à posteriori* judgments *ex effectibus*—Kant twists the terms into a signification of judgments anterior to Experience and judgments posterior to Experience. He makes *à priori* mean that which springs from the mind itself ; *à posteriori* that which springs from the mind in its experience of things. But this is not only a perversion of the Aristotelian distinction, it is a psychological perversion. We may justly say that Leverrier discovered Neptune *à priori.* Before any human eye had seen that planet, his intellect had *foreseen* it. He had determined its position before experience of it ; but the conditions of that determination had been previously furnished by experience. He had foreseen it, because he had seen the effects in the causes ; but these causes had previously been seen in phenomena. The generalizations from Experience daily enable us to foresee *à priori* what effects will result.* But we can never take our standing-point outside Experience, and thence survey phenomena. Yet this is what Kant professes to do with his distinction of *à priori* as the rational origin, from the *à posteriori* as the experimental origin. He makes the logical separation real. Having first isolated sensation from its conditions and its products, he can have no difficulty in showing that Knowledge contains other elements besides sensation. Did anyone ever maintain that sensation *alone* was capable of furnishing knowledge? Did any one ever maintain that beside the mere feeling excited by the contact of sense with an object, there was not also the necessary implication of certain organic conditions which rendered the feeling possible, and which gave it its special character? Did anyone ever maintain that there was not a general uniformity in these conditions which rendered the results uniform, so that all minds would feel alike when all were acted on alike; and also a certain individuality in these conditions, whereby, amid general uniformity of result, there would likewise be individuality of impressions? That psychologists were far from clear on this point may be admitted; but no one ever altogether overlooked it.

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* FICHTE in the Introduction to the *Wissenschaftslehre* excellently remarks that the *à priori* and *à posteriori* are in a true philosophy not two but one viewed in different ways. Thus a number is *à posteriori* when regarded as *given* ; it is *à priori* when regarded as a product of its factors.

Although the spontaneity of Mind was never *wholly* denied, even by those of the Sensational School who regarded Mind as a product of the Senses, nevertheless, opinions on this important point were singularly vague. Locke, as we have seen, presupposed certain native Faculties. Condillac presupposed certain native Capacities. Cabanis and de Tracy presupposed certain Laws of Sensibility. All the schools presupposed certain laws of mental combination. These constituted the subjective conditions of Experience; whatever spontaneity could be attributed to the Mind was assigned to them. But no one accurately defined them. It was Kant's immense merit to have seen clearly the need of accurately determining what these subjective conditions were. He was the first who attempted a clear exposition of the subjective and objective elements in Thought. The attempt made an epoch. Unhappily, having approached a psychological problem from the wrong side, and employing the Metaphysical Method of subjective analysis where the Biological Method of objective analysis was equally indispensable, he not only failed to discover what were the conditions of Sensibility and the Laws of Thought, but by the very potency of his genius retarded progress in that direction.

His initial mistake, almost inevitable on the Method he pursued, is that of transporting into Psychology the old Aristotelian error of Matter and Form as elements separable in reality because they are separable in abstraction. Hence the Forms of Thought became for him ready-made factors, anterior to and independent of Experience. Had he profoundly considered the Aristotelian distinction, he must have had his eyes opened to the conclusion that the Forms of Thought should be sought either physiologically, i.e. in the organic conditions; or psychologically, i.e. in the evolution of Thought. The fact that we think at all is assuredly determined by our being so organised that thought is the activity of the organs; this organisation is therefore *à priori*, i.e anterior to any thought. Now physiological, and psychological, analysis disclose that we are are forced to think as *successive* what in nature is *simultaneous*; that deep down in the very constitution of consciousness lies the indispensable condition of *change*; that inwoven with all psychical experience there is the unalterable presence of the action of *judgment*—the union of a predicate with a subject; these, and several other conditions of Thought, which we cannot expound here, must have disclosed themselves to him; but how would they have presented themselves? as *ready-made* Forms (*fertige Formen*), or as Forms *in the making*? as pre-existent factors, or as evolved results? The Aristotelians, and with them Kant, confounding the potential with the actual, the conditions with the results, would answer this question plainly in favour of the first alternative. Because the form of the oak is evolved from the acorn, they would declare the form to pre-exist in the acorn.* We, knowing that under suitable conditions the acorn will develope into the oak, and, if it develope at all, will assume the Form of an oak, and no other, are allowed to say without danger that the stem, branches, and foliage are organic Forms potentially existing in the acorn. But a scientific Botany is not content with this. Nor will it permit us to say that stem, branches, and foliage are ready made in the acorn, prior to all those influences of heat, moisture, air and manure, which will render possible their evolution. In like manner a scientific Psychology refuses to accept the evolved results of Experience as *à priori* conditions of Experience; refuses to accept the Forms *into* which Thought necessarily developes as the pre-existing and perfected Forms *through* which it is determined.

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* On this fallacy see what is said in the *Prolegomena* to this History, § 51. Compare also the chapters on LEIBNITZ and HEGEL.

That Kant did regard the Forms as wholly independent of organic conditions, is certain. He was not satisfied with assuming the existence of original aptitudes out of which the Forms might grow. 'It is quite possible,' he says, 'that some one may propose a sort of preformation system of Pure Reason, in which the Categories are neither self-conceived, *à priori* first principles of cognition, nor derived from experience, but are merely aptitudes for thought implanted in us contemporaneously with our existence.' He rejects this suggestion on the ground that 'the Categories would thereby lose their character of objective necessity. Nor would there be wanting persons to deny the subjective necessity of the Categories, though they must feel it. Certainly we could never dispute with any one about that which merely depended on the manner in which he was organised.'

Why not? Can we have any better security? And does not Kant himself reduce all certainty to this subjective ground, denying that we can have objective certainty?

Indeed, the very outcome of the *Kritik* is that we can have no knowledge of anything beyond the range of our subjectivity; yet nevertheless we are told that the very necessity and universality of judgments, which are only valid for the world of sense, and cannot be applied to noumena, prove the mind to be endowed with possessions not organically dependent upon Sense.

To make his error apparent, let us see it as a biological proposition. Growth may be regarded as the analogue of Experience; it is the experience of the body, as experience is the growth of the mind. As an abstract term it comprehends a multiplicity of concretes. Growth depends on Nutrition, Experience on Sensation. Nutrition has its conditions, and laws, which determine its direction; we may consider it *à priori*, when we consider Nutrition *ex causis*; or *à posteriori* when we consider it as Growth, *ex effectibus*. The conditions and laws have to be ascertained by research; and, when ascertained, may be expressed in neat formulas. But what should we biologists say to a philosopher who, having learned these formulas, pretended that they were Forms of Life, pre-existent to all Growth, independent of all Nutrition, drawn from a higher source? We should say what positive psychologists will say to Kant: you are committing the metaphysical fallacy of erecting your *posterius* into a *prius*, your product into a factor.

The distinction between *à priori* and *à posteriori* is not that of antecedent to experience and subsequent to experience, since both are judgments of the Intellect, and there is no Intellect in reality (but only as a potentiality) before Experience, which is Intellect in action; the distinction is therefore logical only: *à priori* when *ex causis*, when we view the conditions; *à posteriori* when *ex effectibus*, when we view the *conditions in action* or in result. Kant, who denied Innate Ideas, and declared all ideas *à priori* and *à posteriori* to be acquired, nevertheless supposed that the conditions of Thought might be isolated, and might exist apart, because they could be logically separated from the acts of Thought.

The Mental Forms, like the Vital Forms, may be abstracted from the particular acts of the organism and their consequences; just as we may abstract the form of a river, and draw it on a map, without taking in either the river-stream or the river-banks. Yet, just as no one conceives this Form to have pre-existed, but knows that it was produced as the resultant of the stream-force on the one hand, and the cohesive resistance of the banks on the other, each co-operant, each opposed; so do we conceive that Vital Forms and Mental Forms are the products of organic conditions acting on the stimulus of external objects.

Here may be raised the interesting question: In what sense did Kant understand the Mental Forms? And first: Did he understand them as ready-made moulds, into which the contents of unshaped material were poured? I must confess that, after painful search, I am unable to extract from his pages any decisive answer. That the forms lie ready in the mind, and were not produced by sensations, is unequivocally and uniformly asserted; but whether he regarded these forms as more than potential existences—the only possible forms in which sensation and thought could become actual—cannot positively be decided. At times his language is unequivocal. Here is a brief sentence from the first edition: 'Space and Time are indeed *à priori* Representations which dwell with us as Forms of our sensuous Intuition, even before a real object has through sensation determined our Sense to represent it under those sensuous relations.'

The vacillation of expression may be due to his never having felt the real difficulty, never having distinguished the potential form from the actual form. An illustration may help us here. Crystals have their special forms. We, having discovered these, assert that the solutions, *when* they crystallise, must do so in these forms, and none other: such are the only forms these solutions will assume in crystallisation. The physicist is under no misgiving on this point; but the metaphysicist, failing to appreciate the distinction between possibility and reality, concludes that the forms pre-exist in the solution. Such I incline to think was the fallacy which misled Kant. In his reply to Eberhard* he says the *Critique* 'allows of no innate or unacquired (*anerschaffene*) representations; all of them, intuitions and concepts, are acquired. But there is, to speak with Jurists, a primitive acquisition or inheritance, consequently of that also which previously did not exist, hence belonged to nothing before this act. Such are the Form of things in Space and Time, and the synthetic unity of the manifold in concepts; for neither of these are drawn from objects as given to our cognitive faculty, but are brought *à priori* by that faculty out of itself. There must, however, be a ground or condition in the mind which renders possible that the representations are so and not otherwise, and this ground or condition is innate. So, for example, the first formal condition of the possibility of an intuition of Space is innate, but not the representation of Space itself. (So ist der erste formale Grund der Möglichkeit einer Raumanschauung allein angeboren, nicht die Raumvorstellung selbst.)' He here reduces the whole group of *à priori* form-giving principles to the *conditions of mental action.* In so far he is not at variance with philosophers of the experiential school. But now observe the dilemma: If these principles are merely possible conditions, which only come into actual existence in Experience, then their *à priori* existence is a metaphysical fiction; whereas, if they are *à priori,* and pre-exist as ready-made forms in the mind, then they are, what Kant emphatically declares them not to be, innate.

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* In the edit. of ROSENKRANTZ, i. 444.

The school of Locke pronounced that all our knowledge was limited to experience of things as they appear to us; consequently Ontology was impossible. The school of Leibnitz maintained that we have another purer source of knowledge, anterior to Experience, authenticated by the characters of necessity and universality, which prove it to be *à priori,* since these characters cannot be given *à posteriori*; *ergo,* Ontology is possible. This view was adopted by many of Kant's followers, but Kant himself said: We have, it is true, an *à priori* source of knowledge, having this specified authentication; but inasmuch as it is only applicable to the material of Experience, and not applicable beyond Experience, Ontology is impossible.

The followers were at least more consistent than their master. The very characters of necessity and universality fail to authenticate the *à priori* origin, inasmuch as only *within* the region of Experience are these applicable, and only *from* Experience could they have been evoked, being, as Kant admits, the forms of Experience in action, possibilities which become actualities in constituting Experience; * as the conditions of Nutrition pass from conceivable possibility into visible actuality in Growth, or as the form of the river comes into existence when the conditions of that form (stream-force and bank-force) co-operate.

Our answer to the question: Did Kant understand the Mental Forms as ready-made moulds? must be, therefore, no less equivocal than his own exposition. We must say that he did regard them as ready-made, 'lying ready in the mind,' and in so far antecedent to all Experience, in so far *à priori.* We must also say that he did not regard them as actually existent, but only as potentially existent, the possible conditions of Experience; and in so far they are evolved in Experience, in so far *à posteriori.* From this equivoque and this contradiction there is no escape. Its origin must be sought in his false Method.

By refusing to consider the Mental Forms as results of the organism, Kant shut himself out from the possibility of discovering them. A little attention to biological data would have shown him that his enumeration of the forms was incomplete, and that his conception of them as ready-made was false. The forms he enumerates are too few to express the subjective conditions. He omits Pleasure and Pain, for example, which are inseparable elements of all Sensation, determining all Action. He says nothing of the various Senses, and their conditions; although obviously the reason why vibrations of a given rapidity produce only the sensation of light, and other vibrations only the sensation of heat, lies in the organisation of the retina and the skin-nerves. He would not deny that Light, Heat, and Sound, although special and not universal forms, were Forms of Sensibility in which we clothe the *Ding an sich*; just as Space and Time are universal Forms in which we clothe the *Ding an sich*. Nay, seeing that he used all his ingenuity to show that the Categories of the Understanding played the same part as the Senses in respect of the objective world, it is surprising that he did not also see that *every* subjective condition was entitled to the rank of a Mental Form, an *à priori* element. Every organ necessarily brings with it its special forms, i.e. the special modes under which its activity can go on, modes which determine the reception of stimuli, and thus determine the sensation. Sounds and Images, in their subjective aspects, are not less *à priori* than Concepts. If we can only think under certain Categories, so likewise we can only feel under certain organic conditions.

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* 'Space and Time, pure as these conceptions are from all that is empirical, and certain as it is that they are represented fully *à priori* in the mind, would be completely without objective validity, and without significance, if their necessary use in the objects of experience were not shown.'—*Critick*, p. 118.

Waiving, however, the incompleteness of his enumeration, and accepting Space and Time, the Categories, and the Ideas of Reason as the *summa genera*, I will consider only the validity of his argumentation. Here, *in extenso*, are the four positions on which he grounds the *à priori* and purely subjective nature of Space.

'1. Space is not a conception which has been derived from outward experiences. For in order that certain sensations may relate to something without me (that is, something which occupies a different part of space from that in which I am); in like manner, in order that I may represent them not merely as without of and near each other, but also in separate places, the representation of space must already exist as a foundation. Consequently, the representation of space cannot be borrowed from the relations of external phænomena through experience; but on the contrary, this external experience is itself only possible through the said antecedent experience.

'2. Space, then, is a necessary representation, *à priori*, which serves for the foundation of all external intuitions. We never can imagine or make a representation to ourselves of the non-existence of space, though we must easily enough think that no objects are found in it. It must therefore be considered as the condition of the possibility of the phænomena, and by no means as a determination dependent on them; * and is a representation, *à priori*, which necessarily supplies the basis for external phænomena.

'3. Space is no discursive, or, as we say, general conception of the relations of things, but a pure intuition. For in the first place we can only represent to ourselves one space; and when we talk of divers spaces, we mean only parts of one and the same space. Moreover, these parts cannot antecede this one all-embracing space, as the component parts from which the aggregate can be made up, but can be cogitated only as existing in it. Space is essentially one, and multiplicity in it depends solely upon limitations. Hence it follows that an *à priori* intuition (which is not empirical) lies at the root of all our conceptions of Space. Thus, moreover, the principles of geometry—for example, that in a triangle two sides together are greater than the third—are never deduced from general conceptions of line and triangle, but from intuition, and this *à priori* with apodeictic certainty.

'4. Space is represented as an infinite given quantity. Now every conception must indeed be considered as a representation which is contained in an infinite multitude of different possible representations, which therefore comprises these under itself; but no conception, as such, can be so conceived as if it contained within itself an infinite multitude of representations. Nevertheless, Space is so conceived of, for all parts of space are equally capable of being produced into infinity. Consequently, the original representation of Space is an intuition *à priori*, and not a conception.'*

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* Here the confusion between possible and actual is felt. The Space-form, as a possibility, is not dependent on objects; but as an actuality, it is evolved by objects, and is therefore dependent on them. Kant forgets that in thinking *objects* away, we still leave the thinker as an object in space. Our familiar experience of things removed from before our eyes, leaving what is called 'empty space' behind, enables us to conceive all objects (except ourselves) removed.

Psychologists of the experiential school expound the generation of our idea of Space as an abstract idea gathered from concrete experiences. Kuno Fischer proclaims this generation to be a perfect illustration of what an explanation should *not* be.† 'It presupposes,' he says, 'that which it is to explain. Space and Time are already perfectly present in the experiences from which they are supposed to be abstracted. There is no impression, no perception, no representation, which is *not* in Space and Time.' Surely it must be said of all abstractions, that they are presupposed in their elements? He will not allow this. According to him, the abstract idea Man is made up of particular ideas, men; but Space and Time are not made up of spaces and times, they precede these particulars. 'It is impossible to deduce Space and Time from our perceptions, simply because our perceptions are only possible through Space and Time.'

The fallacy of the argument may most briefly and convincingly be exhibited in an illustration. He would admit that Experience is not *à priori.* If it has any meaning at all, it is *à posteriori.* Apply his argument to it. 'Experience cannot be derived from without. It is impossible to deduce sensations and perceptions from Experience, because they all presuppose it; in every particular experience there is the antecedent groundwork Experience, which determines the possibility of the particular.'

Kant would probably answer, 'No, there is an *à priori* condition, which renders Experience possible; there is not an *à priori* experience.' To which one might reply that Space may have its *à priori* condition in the nature of the mental organism, but this condition is not itself Space; and

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* *Critick of Pure Reason*, p. 23. Compare UEBERWEG: *Grundriss der Gesch. der Philos*, iii. p. 172, for an answer to this fourth position, showing that infinity is only by reflection predicated of possible space, actual space being always a finite concept.

† KUNO FISCHER: *Kant's Leben und die Grundlagen seiner Lehre*, 1860, p. 128. Compare his *Commentary*, p. 36.

Space therefore must be evolved as the product of the two coefficients, the organism on the one hand and the medium on the other, the two together making Experience. Disengaging the topic from the ambiguity of potential forms, we see that on Kant's own principles Space and Time are not *à priori*, not independent of, and anterior to, Experience; consequently that this pillar of the Critical Philosophy rests on a foundation of drifted sand. Yet, so completely has Kant's argumentation enchained the assent of his countrymen, that there is scarcely a single philosopher who has not accepted it; whereas it is rare to find a philosopher in England or France who does not reject it. To the German mind, whatever else may be open to doubt in Kant's system, the discovery of the true nature of Space and Time as *à priori* conditions of Experience admits no doubt.

No little confusion arises from the want of precise definitions. Sometimes Space means Place, sometimes Extension, sometimes Outness. *Place*, or that which contains objects, is obviously an abstract from Experience. *Extension* is likewise engendered in Experience. But the mere *Outness* which is said to underlie all our experiences of sense and to be *implied* in every conception of Place or Extension, is an element involved in Self-consciousness. The Ego cannot be conscious of Self without in the same act being equally conscious of Not Self. Whatever is not Self is out of Self. The inner and outer worlds thus contemporaneously emerge.

Looking at Consciousness in this way, and not by Psychogeny tracing the primitive conditions anterior to the emergence of Self, we may agree with Kant that Space, i.e. Outness, is a primitive and universal form of Consciousness in respect of the Not Self; and that Time is a primitive form of Self or Innerness. If Space be identified with Not Self, and Time with Change, they may be accepted as the primitive conditions of all *objective presentation*, and of all *subjective modification*; as such primitive conditions, they may be said to be virtually *à priori*. But in thus rescuing Kant's *à priori*, by removing it to another foundation, we wholly destroy his system. He makes Space the form of the external senses (not a condition of self-consciousness), and Time the form of the internal sense (not the condition of all consciousness). In the *Kritik* he gives no description of these two senses, but in the *Anthropologie* he is more explicit. This is what he understands by them.* 'Sensibility as a cognitive faculty contains two elements: Sense and Imagination. The first is the faculty of Intuition, when the objects are present: the second, when the objects are absent. The senses, however, are again subdivided into the outer and inner (*sensus externus*, *internus*). The first is that in which the body is affected by bodily things; the second that in which it is affected through the mind. This latter, again, is to be distinguished from the feeling of Pleasure or Pain, which may be named the *innermost* sense (*sensus interior*).' The bodily senses are divided into vital senses (*sensus vagus*) and the organic senses (*sensus fixus*)—that is, 'the five senses,' and the 'visceral sensations' of modern writers. Kant passes in review the five senses, explaining their share in the perception of external objects, and also their inner relations. He then treats of the Inner Sense. 'It is not the pure apperception, a consciousness of what the man *does*, for this belongs to the faculty of thought, but what the man *suffers*, in as far as he is affected by the play of his own thought. . . . . There is only one Inner Sense, because it is not by different organs that man inwardly feels himself.'

The truth is, that only by a loose metaphor can we speak of an Inner Sense at all; and the attempt to class it beside the Outer Senses leads to endless confusion. In the *Kritik*, Kant declares that it is solely on account of the inner representations being *given* to the mind without spontaneity that they are classed under Sensibility, which he had previously distinguished as receptivity. The chaotic nature of his classification reveals itself at every step. Thus he is forced to confess that only three of his five Outer Senses are preeminently objective; the other two (Taste and Smell) are more subjective than objective, relating rather to feeling than to knowledge. Again, speaking of the Sense of Hearing, he says, 'The form of objects are not given by it, nor are articulate sounds in themselves objects, but only inward feelings.' He admits, moreover, that all the outer senses yield representations which become inward when the intensity of impressions is increased. But since he always defines the Inner Sense to be the consciousness of what is passing within (and in one place as the special Form under which the intuition of the inward changes is possible*), it is clear that, on his own showing, to say Space is a Form of Sensibility is incorrect. It is not the form of Sensibility in general; not even of the outer senses; since we have numerous sensations from without which have no space-relations, sometimes not even that outness which belongs to all Not Self; and except as mere outness, it is incorrect to assign Space to Sensibility at all; for although there is a condition under which all intuition of objects is possible, this condition itself is not Space, but Space is the abstraction of all our concrete experiences of Outness. We must therefore say that Sensibility has *two directions*, one outwards, the other inwards; one relating to objects, the other to the feelings; one to Not Self, the other to Self. But it is no less clear, from Kant's principles, that the *direction* of Sensibility is not determined by a special sense, nor by an *à priori* Form, but by the nature and intensity of the sensation. There is no outer sense specially directed to the Not Self; no Form of Sense which determines this outward direction, and is itself Space. Many of the sensations received through the outer senses have no space-relations at all, and, when intense, cease to have even outness, and become inward feelings; on the other hand, inward feelings also acquire outness, and are 'objects' of Consciousness, owing to the very same tendency towards *projection* which characterises all perception. For we must not be misled by the rapidity with which sensations are projected outwards, localised in the body, or at distances from the body; this is not pure sensation itself, but an act of judgment; and Kant, who insisted on the pre-eminently receptive nature of Sensibility, ought not to have overlooked the fact that the projection outwards of a sensation felt within, was an act subsequent to the reception of an impression. Whether this act were the act of Sensibility or Judgment might be a question of terms; but that it was subsequent to the reception of the sensation would suffice to prove that it could not be the ready-made Form, or primary condition of Sensibility.

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* *Anthropologie*, § 13, pp. 153 *sq.*

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* *Kritik: Transcend. Aesthetik*, § 2, p. 62.

A more penetrating psychology would have shown Kant that instead of Space and Time being the primary conditions of Difference, the principle of Difference was the primary condition of Space and Time. Neither emerge until the first distinction between Self and Not Self emerges. But even on his own grounds, we must altogether reject the assignment of Space to the Outer Sense, and of Time to the Inner Sense. The mere outness, or externalisation, of sensations, is the product of manifold experiences; as we know in the difficulty infants have in localising their sensations; it is exhibited as anterior to Experience only by the logical juggle of transposing a result to the position of a principle. In like manner, the elements of Difference which are given in sensation, and from which Quantity and Number are abstracted, are transposed from factors into results, and the Categories are presented as primitive conditions. The conception of Space is originally founded on the vague feeling of Outness, which again is only a projection from Self of the primitive feeling of Difference or Separation; and that such a conception is purely subjective, and does not represent an object, nor a quality of objects, may fairly be granted. Yet we may admit the ideality of Space, as we admit the ideality of the Calculus, without denying that objects, apart from consciousness, have positive qualities represented in consciousness by the elements of Difference, out of which Space is constructed; just as we may admit that objects *per se* may have relations which only in phenomena are numerical, and from which we form the Calculus.

Kant, it is notorious, admits the objective validity of Space and Time, though they are only subjective Forms. He admits their empirical reality. But he denies that they have any application whatever to things *per se*. Here he oversteps his own boundaries. Having affirmed that things *per se* are wholly beyond the reach of knowledge, he brings them within that reach directly he affirms what they have *not*. We cannot know that Space and Time do not belong to noumena, if we do not know noumena at all. Noumena may agree with phenomena in this and many other points. Indeed, before we accepted any negative respecting them, we should need stringent proof. What proof does Kant propose? Simply that because Space and Time are true of phenomena they must be false of noumena. *Non constat.* Why not true of both? Phenomena are the noumena as represented in consciousness; why assume that in and out of consciousness there is more than a formal difference? or how prove it? Here we once more return to his old position that Space and Time being ready-made Forms, solely belonging to the Mind, they cannot belong to what is not Mind. It is the iteration of his fundamental hypothesis of *à priori* Forms; a hypothesis accepted by his countrymen without demur, a hypothesis which has everything against it. The very process by which he pretends to discover the forms is a sheer impossibility. To lay bare what is *à priori* in our empirical intuitions, we are told to eliminate every element that is not empirical, everything belonging to sensation; but this we cannot do—it is asking us to leap over our own shadow. To eliminate the elements furnished by sensation, we must first know what are the elements not furnished by sensation. We must thus know the *à priori* elements before we can isolate them. The only criterion vouchsafed is that impracticable criterion of necessity and universality; as if a sensation were not as necessary as an axiom, provided the conditions of the sensation be preserved!

I affirm that the attempt to discriminate the objective from the subjective, the *à posteriori* from the *à priori* elements in consciousness, is utterly chimerical. I here use the term objective as signifying what is given in sensation, which is one of the Kantian meanings, and corresponds with the *à posteriori* element. The distinction between these two elements is considered the great achievement of the Critical Philosophy. The doctrine of the relativity of Knowledge, never wholly absent from speculation since the days of Protagoras, assumed in Kant's hands a precision and influence which gave an immense impetus to Speculation. Nevertheless, there was an initial misconception in his attempt to isolate the elements of an indissoluble act. It was one thing to assume that there are necessarily two co-efficients in the function; another thing to assume that these could be isolated and studied apart. It was one thing to say, Here is an organism with its inherited structure, and aptitudes dependent on that structure, which must be considered as necessarily determining the forms in which it will be affected by external agencies, so that all experience will be a compound of subjective and objective conditions; another thing to say, Here is the pure *à priori* element in every experience, the form which the mind impresses on the matter given externally. The first was an almost inevitable conclusion; the second was a fiction. Psychology, if it can show us anything, can show the absolute impossibility of our discriminating the objective from the subjective elements. In the first place, the attempt would only be possible on the ground that we could, at any time and in any way, disengage Thought from its content: separate in Feeling the object as it is out of all relation to Sensibility, or the subject as pure subject. If we could do this in one instance, we should have a basis for the investigation. The chemist who has learned to detect the existence of an acid by its reactions in one case, can by its reactions detect it in other cases. Having experience of an acid and an alkali, each apart from the other, he can separate them when finding them combined in a salt, or he can combine them when he finds them separate. His analysis and synthesis are possible, because he has elsewhere learned the nature of each element separately. But such analysis or synthesis is impossible with the objective and subjective elements of thought. Neither element is ever given alone. Pure thought and pure matter are unknown quantities, to be reached by no equation. The thought is necessarily and universally subject-object; matter is necessarily, and to us universally, object-subject. Thought is only called into existence under appropriate conditions; and in the objective stimulus, the object and subject are merged, as acid and base are merged in the salt.* When I say that the sensation of light is a compound of objective vibrations and retinal susceptibility, I use language which is intelligible and serviceable for my purpose; but I must not imagine that the external object named vibration is the *Ding an sich*, the pure object out of all relation to sensibility; nor that the retinal susceptibility is pure subject, involving no vibration. Kant himself would assure me that the vibrations were as subjective as the susceptibility. Indeed, seeing that he denied altogether the possibility of a knowledge of pure object, the *Ding an sich*, it was a violent strain of logic to conclude that in thought he could separate this unknowable object from the subject knowing it. And if we keep within the circle of phenomena, and seek only the *à priori* and *à posteriori* elements of Experience, merely saying this element is, and this is not, furnished by Experience, we commit the same oversight—we pretend to separate that which is never given to us separable. Indeed, one needs but a little attention to the facts of Psychology to see that the exact *reverse* of Kant's position must be taken: the *à priori* principles said by him to precede Experience are recognised as *experiences organised.* Whatever truly is *à priori* (in Kant's sense) cannot be known *à posteriori.* Yet we need but a glance at Kant's writings to perceive that his *à priori* principles are all discovered and proved *à posteriori.* What would his principle of Causality be, were there no *à posteriori* experience of Change? Whence Quantity, were there no objects quantified? Is not the very Ego an empirical representation according to him?

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* 'Der menschliche Geist ist als getrennter Geist nicht der göttliche und lebt von der Erregung, die er empfängt, um das Empfangene selbstthätig in sein Eigenthum zu verwandeln.'—TRENDELENBURG: *Logische Unters.* i. 135.

Let me now recapitulate the course of our argument, which has presented under various aspects the fundamental errors of Kant's system. Only these fundamental errors have been noticed. partly because with these the system falls, and partly because it is precisely these that German critics neglect. We have seen that the criterion incessantly invoked is no criterion at all. The necessity and universality of a judgment cannot establish its *à priori* character, its independence of Experience, if we understand by Experience more than simple sensation, and more than the individual experience of any one man—if we understand by it all that has been evolved and organised in the race, and registered in science. Our grounds for denying Kant's position were that all identical propositions are necessarily and universally true, whether these be axioms, or sensible experiences of indubitably *à posteriori* character; on the other hand, no propositions are true unless identical. Further, that since on Kant's showing these *à priori* principles have no application except in Experience, are not true except in regard to phenomena, their existence anterior to, and independent of, Experience (otherwise than as the already organised Experience of the race) is untenable. And it is because Kant perverts the meaning of *à priori* from *ex causis* to *ante experientiam*, and overlooks the fact that the organised experience enables us to foresee, *ex causis*, what individual experience has not yet seen, that his argument wears its plausible aspect when he says we have within us judgments which we could never have experienced. His leading mistake is the adoption of the scholastic distinction between Matter and Form, as if these logical separables were real separables, independent existences, one added to the other. And his escape from the obvious absurdity of this notion was in the adoption of the other scholastic distinction of potential and actual existence.

We then considered his hypothesis of Mental Forms, and perceived this dilemma: either the Forms of Space and Time, and the Categories, are ready-made, actual forms, existing prior to all Experience; or they are simply possible forms, existing ideally in the conditions out of which Experience will evolve them. In the first case they are *à priori*—but then they are the same as Innate Ideas, which he repudiated. In the second case they are *à posteriori*—being *functions* of the conditions and experience. The first of the alternatives is contradictory and absurd; the second is contradictory of his system, but is rational.

We then examined his doctrine of Space and Time as purely subjective Forms, having no equivalent objective relations, and saw reason to conclude that in all points it was defective. It neither established Space and Time as *à priori* principles, nor even as forms of Sensibility. Nor did it prove the essential point, that Space and Time were not abstractions from the concrete experiences of objects.

It was then shown that Kant's attempt to isolate the objective from the subjective elements was chimerical, and that he himself always drew his *à priori* principles from *à posteriori* materials; like every one else, he drew his conceptions of causes from his experience of effects. Having drawn these out, he transformed his *posterius* into a *prius*, and placed the cart before the horse.

I cannot refrain from citing here a characteristic example of this fallacy, which plays so great a part in Metaphysics. The question of man's erect position has in all times occupied biologists, and often interested philosophers. It has been debated whether man owes this position to his reason, or his reason to this erect position. An Italian anatomist of the last century, Moscati, wrote a treatise to prove the former thesis, showing how for a mere animal the erect position was a disadvantage. Kant reviewed this work with great approbation, and argued that because man was destined for society, and his reason taught him that for society the erect position was the most suitable, hence he overcame the animal tendency, and walked erect!

Want of space forbids my touching on other points in Kant's system, although his position with respect to Idealism, and the contradictions involved in his conception of Freedom as a *Ding an sich*, might profitably engage us at some length. Were there not disputes on all points connected with his system, one might marvel at the wide divergence of opinion respecting his Idealism. I have myself no doubt that Kant was sincere in his repudiation of Idealism.* Indeed, what meaning could there have been in repeated declarations that things *per se* were unknowable, unless he believed in things existing *per se*? What significance has his apparatus of cognition, unless it fashion for us appearances of things that *are* otherwise than as they *appear*? In summing up the 'Transcendental Æsthetic,' he remarks that the 'things we intuite are not in themselves the same as our representations of them, nor are their relations in themselves what they appear to us.' It is perfectly true that the emphasis he throws on the subjective element, and the way in which the mind creates *its* objects, has by many been interpreted into evidence of his Idealism. But here it is forgotten that he never overlooks the distinction between the phenomena which the mind fashions, and the noumena which it only postulates.

The most unsatisfactory part of Kuno Fischer's otherwise careful and penetrating exposition of Kant, seems to me his persistent effort to make out Kant's Idealism. Whether the Critical Philosophy must espouse Idealism or confess itself overthrown is one thing, whether Kant himself saw this is another. Fischer, having convinced himself that Idealism is the logical outcome of the system, is convinced that Kant could hold no other doctrine. 'All objects of possible experience are phenomena. All phenomena are nothing but representations within us; they cannot be things *per se*, any more than things *per se* can be phenomena. This is the strictly idealistic teaching of the critical philosophy.'[*] The answer is simple. All *objects* are phenomena; but the conditions of possible experience involve an existence known, as well as an existence knowing; the existence known is a phenomenon, and this phenomenon is only the known aspect of the noumenon which is unknown. But we must not pause to vindicate Kant's consistency; the more so as Mr. Mahaffy has ably done so, and satisfactorily set aside Schopenhauer's pretended discovery of a suppression of the Idealistic teaching contained in the first edition of the *Critique*. Rightly, or wrongly, Kant did maintain the existence of a world beyond the world of phenomena. The *Ding an sich*, the objective noumenon, could not, he affirmed, be known by us, because it necessarily became a phenomenon in becoming known. But it nevertheless existed, and its existence was a necessary postulate. We only know *that* it is, not *what* it is.[†] The Idealist might, perhaps, justifiably retort upon him, that this Noumenon was only a *suppressed category*—a postulate of the Understanding, and, as such, no less subjective than Time and Space, or Cause and Effect. Again, when Kant attempts to discriminate between Phenomenon and Phantasm (*Erscheinung* and *Schein*), in that the Phenomenon has an objective cause, the Idealist might retort, But you have shown that Causality itself is only a subjective category.

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* See *Anhang* to the *Prolegomena*, iii. 303.

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[*] KUNO FISCHER: *Commentary*, p. 172.

[†] Mr. MANSEL makes the following objection. 'When Kant declares that the objects of our intuition *are not* in themselves as they appear to us, he falls into the opposite extreme to that which he is combating; the Critic becomes a Dogmatist in negation. To warrant this conclusion we must previously have compared things as they are with things as they seem; a comparison which is, *ex hypothesi*, impossible. We can only say that we have no means of determining whether they agree or not.'—*Prolegomena Logica*, p. 82. But KANT is justified, if once the position be allowed that we necessarily mingle the conditions of our Sensibility with the external stimulus; to the extent in which the subject is a factor, to that extent must it be a modifier.

I must close here this necessarily imperfect account of the greatest of modern metaphysicians, and, in closing it, I cannot better express my sense of his greatness than by advising the student to undertake a careful and meditative reading and re-reading of the *Kritik*, the *Prolegomena*, and the *Anfangsgründe der Naturwissenschaft*; not as sources of available knowledge, but as examples of metaphysical power. I have before likened the Critical Philosophy to the French Revolution, both destroying much that will probably never be restored, but neither founding a solid result. Feudal institutions have disappeared; the ardent belief in a Republic as the political panacea has survived, in spite of bitter experience and successive failure. In like manner, Scholastic traditions have disappeared; Philosophy is no longer living upon 'demonstrations of the existence of God,' and such like achievements; but the ardent belief in the Metaphysical Method as a means of explaining the Universe has survived, in spite of incessant failure. The republicans of to-day admit that the Gironde was incompetent and the Convention a mistake; but their faith in *the* Republic is unquenchable by failure. The metaphysicians admit that Kant's system was incomplete, Fichte's a failure, and that Hegel's is a ruin; but their faith in German Philosophy is unquenchable, and in this they are all followers of Kant. Now although, as I conceive, Kant was mistaken in Method and fallacious in results, this was the fault of Metaphysics, not the weakness of the metaphysician; seeing, therefore, that metaphysical problems must be mooted, if only in order that we should learn their insolubility, his writings command attention by their powerful argument, and their stimulating dialectics.

TENTH EPOCH.

Philosophy once more asserts a claim to absolute Knowledge.

CHAPTER I.

FICHTE.

§ I. LIFE OF FICHTE.

JOHANN GOTTLIEB FICHTE was born at Rammenau, a village lying between Bischofswerda and Pulsnitz, in Upper Lusatia, on May 19, 1762.* His childhood, of which many touching anecdotes are related, was signalised by extraordinary intellectual capacity and great moral energy. He was a precocious child, and long before he was old enough to be sent to school he learned many things from his father, who taught him to read, and taught him the pious songs and proverbs which formed his own simple stock. With these was mixed an enchanting element—the stories of his early wanderings in Saxony and Franconia, stories to which young Johann listened with never-tiring eagerness. It was probably the vague longings which these recitals inspired, that made him wander into the fields, quitting his companions to roam away and enjoy the luxury of solitude. This pale and meditative child is at his ease in solitude. He stands for hours, gazing into the far distance, or in mournful yearning at the silent sky over-arching him. The sun goes down and the boy returns home melancholy with the twilight. He does this so constantly that neighbours remark it; comment on it; and, in after-years, when that boy has become a renowned man, they recur to it with sudden pleasure, not forgetting also that they had 'always said there was something remarkable in the boy.'

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* See the biography by Fichte's son—*Fichte's Leben und literarischer Briefwechsel*, 2 vols. 1836.

Fichte's progress was so rapid that he was soon entrusted with the office of reading family prayers; and his father cherished the hope of one day seeing him a clergyman.

Fichte had become a *Candidatus Theologiæ*, but his patron died, and with him died all hopes of being a clergyman. His prospects were gloomy in the extreme; but he was relieved from anxiety by being offered the situation of private tutor in a family in Switzerland. He soon afterwards made acquaintance with Lavater and some other literary men. He also formed an attachment, which was to last him through life, with a niece of Klopstock.

His tutorship was remarkable. The parents of his pupils, although neither perfectly comprehending his plans, nor approving of that part which they did comprehend, were nevertheless such admirers of his moral character—they stood in such respectful awe of him—that they were induced to submit their own conduct with respect to their children to his judgment. We presume that all well-meaning tutors occasionally make suggestions to parents respecting certain points in their conduct towards the children; but Fichte's plan is, we fancy, quite unexampled in the history of such relations. He kept a journal, which he laid before them every week, and in which he had noted the faults of conduct of which they had been guilty. This lets us into the secret of Fichte's firm and truthful character, as much as anything we know about him. It was from such a soil that we might expect to find growing the moral doctrines which afterwards made his name illustrious. But this domestic censorship could not last long; it lasted for two years; and that it should have lasted so long is, as has been remarked, strong evidence of the respect in which his character was held. But it was irksome, insupportable, and ended at length in mutual dissatisfaction. He was forced to seek some other mode of subsistence. He went to Leipzig, where he gave private lessons in Greek and Philosophy, and became acquainted with the writings of Kant. This was an important event to him. Hear in what terms he speaks of it:—

'I have been living, for the last four or five months in Leipzig, the happiest life I can remember. I came here with my head full of grand projects, which all burst one after another, like so many soap-bubbles, without leaving me so much as the froth. At first this troubled me a little, and, half in despair, I took a step which I ought to have taken long before. Since I could not alter what was without me, I resolved to try and alter what was within. I threw myself into Philosophy—the Kantian, *videlicet*—and here I found the true antidote for all my evils, and joy enough into the bargain. The influence which this Philosophy, particularly the ethical part of it (which however is unintelligible without a previous study of the *Kritik der reinen Vernunft*), has had upon my whole system of thought, the revolution which it has effected in my mind, is not to be described. To you especially I owe the declaration, that I now believe, with all my heart, in free will, and that I see that under this supposition alone can duty, virtue, and morality have any existence. From the opposite proposition, of the necessity of all human actions, must flow the most injurious consequences to society; and it may, in fact, be in part the source of the corrupt morals of the higher classes which we hear so much of. Should any one adopting it remain virtuous, we must look for the cause of his purity elsewhere than in the innocuousness of the doctrine. With many it is their want of logical consequence in their actions.

'I am furthermore well convinced that this life is not the land of enjoyment, but of labour and toil, and that every joy is granted to us but to strengthen us for further exertion; that the management of our own fate is by no means required of us, but only self-culture. I trouble myself therefore not at all concerning the things that are without; I endeavour not to appear, but to *be*. And to this perhaps I owe the deep tranquillity I enjoy; external position however is well enough suited to such a frame of mind. I am no man's master, and no man's slave. As to prospects, I have none at all, for the constitution of the church here does not suit me, nor, to say the truth, that of the people either. As long as I can maintain my present independence I shall certainly do so. I have been for some time working at an explanatory abridgment of *Kritik der Urtheilskraft* (Critical Inquiry into the Faculty of Judgment), but I am afraid I shall be obliged to come before the public in a very immature state, to prevent being forestalled by a hundred vamped-up publications. Should the child ever make its appearance, I will send it to you.' *

It was in consequence of his admiration of Kant, that, after several ineffectual attempts to settle himself, he went to Königsberg. Instead of a letter of introduction, Fichte presented Kant with a work, written in eight days, and which bore the title of *A Critique of every possible Revelation.* Kant at once recognised his peer, and received him warmly. But Kant himself, though celebrated, was neither rich nor influential. Fichte's affairs were desperate. We have his own confession in the fragments of a journal which he kept at the time:—

'*August* 28.—I yesterday began to revise my *Critique.* In the course of my meditation some new and excellent ideas were excogitated, which convinced me that my work was superficial. I endeavoured to carry out my investigation today; but my imagination led me so far away, that I could do nothing. I have reckoned my finances, and find that I have just enough to subsist on for a fortnight. It is true this is not the first time in my life that I have found myself in such an embarrassment, but I was then in my own country; besides, in growing older, one's sense of honour becomes more delicate, and distress is more and more of a hardship. . .

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* It was never printed; probably because, as he here anticipates, he was forestalled.

I have not been able to make any resolution. I certainly shall not speak on the subject to M. Borowsky, to whom Kant has given me an introduction. If I speak to any one, it shall be to Kant himself.

'*Sept.* 1.—I have made a resolution which I must communicate to Kant. A situation as tutor, however reluctantly I might accept it, does not even offer itself; while, on the other hand, the incertitude in which I am placed does not allow me to work. I must return home. I can perhaps borrow from Kant the small sum necessary for my journey. I went to him to-day for that purpose, but my courage failed me; I resolved to write to him.

'*Sept.* 2.—I finished my letter to Kant, and sent it.

'*Sept.* 3.—Received an invitation to dinner from Kant. He received me with his usual cordiality; but informed me that it would be quite out of his power to accede to my request for another fortnight. Such amiable frankness!

'I have done nothing lately; but I shall set myself to work, and leave the rest to Providence.

'*Sept.* 6.—Dined with Kant, who proposed that I should sell the MS. of my *Critique* to Hartung the bookseller. "It is admirably written," said he, when I told him I was going to rewrite it. Is that true? It is Kant who says so.

'*Sept.* 12.—I wanted to work to-day; but could do nothing. How will this end? What will become of me a week hence? Then all my money will be gone.'

These extracts will not be read without emotion. They paint a curious picture in the life of our philosopher: a life which was little more than a perpetual and energetic combat.

The *Critique* was published anonymously, and gained immense applause; partly, no doubt, because it was generally mistaken for the production of Kant himself. The celebrity acquired when the authorship was disclosed was the means of procuring Fichte the chair of Philosophy at Jena, the offer of which was made him towards the end of 1793.

Jena was then the leading University of Germany; and Fichte might flatter himself that at length he had a settled position, in which he might calmly develope his scientific views. But his was a Fighter's destiny. Even here, at Jena, he found himself soon opposing and opposed. His endeavours to instil a higher moral feeling into the students —his anxiety for their better culture—only brought on him the accusation of endeavouring to undermine the religious institutions of his country; and his speculative views brought on him the charge of atheism.

Atheism is a grave charge, and yet how lightly made! The history of opinion abounds in instances of this levity; yet scarcely ever was a charge more groundless in appearance than that against Fichte, whose system was atheistic only in superficial appearance. Nevertheless the cry was raised, and he had to battle against it. It is understood that the Government would have been willing to overlook the publication of the work which raised this cry, if Fichte had made any sort of explanatory modification; but he would not hear of it, tendered his resignation, and soon afterwards found an asylum in Prussia, where he occupied the chair at Erlangen, and afterwards at Berlin. From his career at Berlin we will select one incident typical of his character.

The students assembled in crowds to hear their favourite professor, who was to lecture that day upon duty—on that duty whose ideal grandeur his impassioned eloquence has revealed to them. Fichte arrived, calm and modest. He lectured with his usual dignified calmness, rising into fiery bursts of eloquence, but governed by the same marvellous rigour of logic as before. He led them to the present state of affairs. On this topic he grew still more animated; the rolling of drums without frequently drowning his voice, and giving him fresh spirit. He pointed to the bleeding wounds of his country; he warmed with hatred against oppressors; and enforced it as the duty of every one to lend his single arm to save his country.

'This course of lectures,' he exclaimed, 'will be suspended till the end of the campaign. We will resume them in a free country, or die in the attempt to recover her freedom.' Loud shouts respondent ring through the hall; clapping of hands and stamping of feet make answer to the rolling drums without; every German heart there present is moved, as at the sound of a trumpet. Fichte descends; passes through the crowd; and places himself in the ranks of a corps of volunteers then departing for the army. It is the commencement of the memorable campaign of 1813.

In another year he was no more; he fell, not by a French bullet, but by the fever caught while tending his loved wife, who herself had fallen a victim to her attendance on unknown sufferers. On January 28, 1814, aged fifty-two, this noble Fichte expired.

There are few characters which inspire more admiration; we must all admire 'that cold, colossal, adamantine spirit standing erect and clear, like a Cato Major among the degenerate men; fit to have been the teacher of the Stoa, and to have discoursed of beauty and virtue in the groves of Academe! So robust an intellect, a soul so calm, so lofty, massive, and immovable has not mingled in philosophical discussion since the time of Luther. For the man rises before us amid contradiction and debate like a granite mountain amid clouds and winds. Ridicule of the best that could be commanded has been already tried against him; but it could not avail. What was the wit of a thousand wits to him? The cry of a thousand choughs assaulting that old cliff of granite; seen from the summit, these, as they winged the midway air, showed scarce so gross as beetles, and their cry was seldom even audible. Fichte's opinions may be true or false; but his character as a thinker can be slightly valued only by those who know it ill; and as a man approved by action and suffering, in his life and in his death, he ranks with a class of men who were common only in better ages than ours.'*

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* CARLYLE.

§ II. FROM KANT TO FICHTE.

Although the logical outcome of Kant's all-shattering Critique would have been the relinquishment of metaphysical speculation, and the restriction of all speculation to the sensible world of Experience, his unfortunate adherence to the old fallacy of an *à priori* source of Knowledge, antecedent in time, and higher in validity to the sources from which it was evolved, kept the imaginary issues into a suprasensible world still open, and tempted speculation again and again to found a Philosophy *somewhere* in the dim Beyond. Experience was still despised; the Methods of Experience were disregarded. Self-introspection was held to be the only rational procedure. The mystery of things was sought in the unravelment of logical knots.

Reinhold began by perfecting Kant. He found in Kant a luminous account of our perceptions, *Vorstellungen*, but a very obscure account of the faculty by which these were produced. The old metaphysical yearning for a single Principle from which to deduce all phenomena made him seek this Principle in a representative Faculty. This was an easy transition to the Idealism of Sigismund Beck and Fichte. Beck showed that Kant's principles required a demonstration of the link between the Object and the Subject—in other words, an answer to the old question: How can Matter act on Mind? And he easily proved that no such answer was forthcoming; that, on the contrary, the only way to meet the question was to deny its legitimacy, to declare there was *no* link, nor any need of such; the assumption of an Object that was not itself the product of a Subject—of Matter that was not a phenomenon of Mind—was illusory. According to Beck, the realism of Kant was a betrayal of the critical stand-point, a relapse into the old dogmatical mode of thought; or, as Jacobi expresses it, 'Without the assumption of a thing *per se* as an object, we cannot get into the critical system; and with this assumption, we cannot remain in it.'* Beck concluded that the Object must be accepted only as a product of the representative conditions.

The scepticism of Schultze and Maimon having played havoc with the dogmatic part of the Kantian system, Jacobi's insistance on the supremacy of Faith, and its instrument the Intellectual Intuition, found an eager welcome. As Kant maintained Sense to be a faculty whereby we are affected from the sensible side, so Jacobi maintained Reason to be a faculty whereby we are affected from the suprasensible side.

Combine these various tendencies, and the genesis of Fichte's system is apparent. My limited space forbids any attempt to expound this genesis in detail; the excellent work of Kuno Fischer devotes some 200 pages to it; and to those pages or to Michelet's history the student is referred.† Of all these post-Kantian attempts one is tempted to say with Hegel: 'Now-a-days we have come out of the Kantian philosophy, and every one pretends to have got further. To get further has nevertheless a twofold sense: it may be further forwards or further backwards. Many of our philosophic efforts are, when seen in their twilight, nothing more than the procedure of the old Metaphysic, an uncritical casting about (*ein unkritisches Dahindenken*), according to the thinker's capacity.' ‡ Only those who have wasted precious hours in trying to extract rational suggestions from the mass of works produced at this period, and subsequently, can form any conception of the terrible significance of Hegel's sarcasm on the 'getting further backwards' which is visible on all sides. I will cite but one example, and I choose an eminent one. Bardili is perhaps the most considerable of Fichte's predecessors; yet this is what he naïvely advances as a great discovery:—Every one must admit as an irresistible postulate that whatever is *real* must first be *possible*. Nevertheless every one has the notion of reality before that of possibility, which he subsequently seeks to explain. But even this reality would not be known to him, had not a sensuous stimulus preceded it. Now it is obvious that the Possibility which is always presupposed for every Reality must be sought in the nature of Thought. Hence there is something in man which is *virtually* the First—which is last in the order of consciousness, yet precedes both the notion, and the stimulus, in the order of Being. To call this First, this Determining, a mere Nothing, would be to call Reality itself a Nothing, since Reality itself could not be unless Possibility preceded it. Hence the conclusion: *Thought is the ground of all.* If man knew the Possibility of everything, he would know the ground of everything; and if he knew the ground, he would at the same time know everything in and under the necessity through which and under which it is *this thing*: in other words, he would know the thing *per se*. Thus while the subjective process is Sense-impulse, Reality, Possibility, the objective process is Possibility, Reality, Sense-impulse. What *seems* last is really *first.**

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* JACOBI: *Werke*, ii. 304.

† KUNO FISCHER: *Gesch. d. neuern Phil.* Bd. V. *Fichte und seine Vorgänger*, 1868. MICHELET: *Geschichte der letzten Systeme*, 1837. Bd. I.

‡ HEGEL: *Encyklopädie*, § 41, p. 87.

It is needless to criticise such speculation. Enough is done if attention be called to it, and to its naïve presentation of the 'potential fallacy' which incessantly reappears in German Philosophy.

Kant's exposition of the ideality of Space and Time, and the unknowable nature of the *Ding an sich*, easily led to a complete denial of any external reality which was not a mere externalisation of Consciousness. If Space and Time are only representations, then, as Jacobi remarked, the objects in Space and Time are only representations. Our external intuitions refer to objects in Space; but Space is within us, and what is in Space cannot therefore be without us. The permanent object of external intuition is Matter; but Kant declares Matter to be only an Appearance—'the moveable in Space.' In a word, the objects supposed by Common Sense to be out of us are shown by Kant to be constructed out of sensible modifications and the forms of Pure Reason. It is we who create the world. This was what Jacobi read in Kant. Maimon also pointed in the same direction; and Fichte's 'boundless admiration' for Maimon is known.

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* BARDILI'S *und* REINHOLD'S *Briefwechsel über das Wesen der Philosophie.* München, 1804, pp. 24–6. MICHELET, though giving a good analysis of BARDILI'S *Logik*, does not seem to know this later work, the chief interest of which perhaps arises from the generous ardour which animates the truth-loving REINHOLD, making him declare himself the disciple of his younger rival. Philosophers are rarely thus disposed to forsake their own systems to embrace the system of a contemporary.

We can therefore understand how Fichte persisted in declaring that his system was identical with Kant's, though reached by a different route, and expressed by another form. It was *his* interpretation of Kant. But since Kant himself decisively repudiated this interpretation,* and may at least be credited with having the best right to affirm what was, and what was not, his meaning, we shall do well to abide by his decision, even should we think that Fichte's interpretation is the more consistent with the Kantian principles. I have already expressed the opinion that Kant was not an Idealist. If he is to be reproached with his postulate of the *Ding an sich*, an equivalent reproach may be urged against Fichte's postulate of the Appulse (*Anstoss*), of which we shall hear presently. Kuno Fischer, who strives his utmost to establish Kant's Idealism, endeavours to prove that Fichte's 'intellectual intuition' is no more than Kant's 'pure apperception;'† and so great is the obscurity of the *Kritik*, that one finds it difficult to say what precisely was Kant's meaning. But I cannot agree that Kant held 'the pure Ego as the condition of all Consciousness, the condition of the sum total of Experience, consequently the Ego is the source from which the universe is to be deduced.' In this argument Fischer, following Jacobi, Fichte, Hegel, and others, seems to me to misrepresent Kant's position by the unobserved substitution of *a* condition for *the* condition. That the Ego is one of the conditions of Consciousness, and the one which impresses on it its peculiar form, giving unity to the manifold of Sense, no Realist ever doubted; that it is the *sole* condition, only the Idealists affirm. Beside the condition, the Ego, Kant assumed another condition, the Non-Ego; beside the *Ich* there was the *Ding an sich.* Nor is this position rendered doubtful by the suggestion Kant throws out in the first edition, that the Thing *per se* underlying all phenomena *may* be one and the same thinking substance with the Ego —it is a possibility not to be denied simply 'because we *know nothing of the Thing per se*, and cannot, therefore, say wherein the Ego is different from it'—and even if the identity be affirmed, it is only an affirmation of Monism, not of Idealism.

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* A repudiation which elicited from FICHTE the sarcasm (in a letter to REINHOLD) that KANT was a *Dreiviertelskopf*—'the three-fourths of a philosopher;' and that the 'holy spirit in Kant' spoke more truly in the *Kritik* than Kant's individual person had thought.

† *Op. cit.* v. 478.

It is time, however, to address ourselves to Fichte's own views. These are expounded in an abstract and repulsive style in his *Theory of Science*, and in a rhetorical popular style in his *Destination of Man.* I shall borrow from both, without, however, verbally following either.

By way of preliminary, let us observe the use, and the equivocal use, made of the term *setzen* by Fichte and most of his successors. In English it is commonly translated 'to posit,' which has an uncouth look; 'to pose' would, however, be misleading, because that term has already its application, signifying 'to adopt an attitude;' otherwise, 'to pose' would harmonise with all the other terms, 'suppose,' 'propose,' 'oppose.' *Satz* is a proposition; *setzen* is to pose (or posit); *Voraussetzung* is a supposition. When we make a proposition, we affirm a predicate of a subject; but when a German *posits* one idea besides another, he is apt to conclude that this *Setzen* is an action which has for its result an objective effect—it is a *Thathandlung*, and the affirmation thereby becomes a reality. Hegel regards this equivocalness of the German language as a proof of its philosophic insight.

§ III. FICHTE'S SYSTEM.

We are supposed to perceive external objects through the ideas which these objects excite in us. But this assumption is not warranted by the facts of consciousness. What is the fundamental fact? It is that I have in my mind a certain idea. This, and this only, is primarily given. When we leave this fact in quest of an explanation, we are forced to admit either that this idea is spontaneously evolved *by me*; or else some *not-me*—something different from myself has excited it *in me.*

Kant postulated the existence of a Non-Ego, but declared that we know nothing of it. In this he followed Locke and the majority of philosophers.

Truly, said Fichte, we know nothing of it; we can only know that which passes within ourselves. Only so much as we are *conscious* of, can we know; but in consciousness there is no *object* given, there is only an *idea* given. Are we forced by the very laws of our reason to suppose that there is Non-Ego existing?—are we forced to assume that these ideas are images of something *out* of us and independent of us? To what does this dilemma bring us? Simply to this: that the very assumption, here called a necessary consequence of our mental constitution—this Non-Ego, which must be postulated, is, after all, nothing but a postulate of our reason; is therefore a *product of the Ego.* It is the Ego which thus *creates the necessity* for a Non-Ego; it is the Ego which thus, *answering to the necessity, creates the Non-Ego wanted.* Ideas, and nothing but ideas, are given in the primary fact of consciousness. These are the products of the *activity* of the Ego; and not, as is so commonly asserted, the products of the *passivity* of the Ego. The soul is no passive mirror reflecting images. It is an active principle creating them. The soul is no lifeless *receptivity.* Were it not brimming over with life and activity, perception would be impossible. One stone does not perceive another. A mould does not perceive the liquid that is poured into it.

Consciousness is in its very essence an activity. Well, then, if in its activity it produces images, and if by the laws of its nature it is forced to assume that these images have some substratum, what is this assumption but *another* form of the soul's activity? If the Ego is conscious of its changes, and yet is forced to attribute these changes to some external cause, what is this very act of assuming an external cause but the pure act of the Ego?—another change in the consciousness?

You admit that we cannot know Substance; all our knowledge is limited to accidents—to phenomena. But, you say, you are forced to assume a Substance as the basis of these accidents—a noumenon as that whereby phenomena are possible; and yet you cannot *know* this noumenon. Fichte answers: If you cannot *know* it, your assumption, as the mere product of your reason, is nothing more nor less than another form of the activity of the Ego. It is *you* who assume; and you assume *what* you call Substance. Substance is nothing but the *synthesis of accidents*. And it is a mental synthesis.

Thus Fichte founded Idealism upon the basis of consciousness, which was the admitted basis of all certitude; and he not only founded Idealism, but reduced the Ego to an activity, and all *knowledge* to an *act*.

The activity of the Ego is of course an assumption, but it is the only assumption necessary for the construction of a science. That once admitted, the existence of the Non-Ego, as a product of the Ego, follows as a necessary consequence.

Every one will admit that A = A; or that A *is* A. This is an axiom which is known intuitively, and has no need of proof. It is the proposition of identity (*Satz der Identität*). It is absolutely true. In admitting this to be absolutely true, we ascribe to the mind a faculty of knowing absolute truth.

But in saying A equals A, we do not affirm the *existence* of A; we only affirm that *if* A exist, then it must equal A. And the axiom teaches us not that A exists, but there is a necessary relation between a certain *if* and *then*; and this necessary relation we will call x. But this relation, this x, is only *in* the Ego, comes only *from* the Ego. It is the Ego that judges in the preceding axiom that A=A; and it judges my means of x.

To reduce this to language a little less repulsive, we may say that, in every judgment which the mind makes, the act of judging is an act of the Ego.

But as the x is wholly in the Ego, so therefore is A *in* the Ego, and is posited *by* the Ego. And by this we see that there is *something* in the Ego which is for ever one and the same, and that is the x. Hence the formula, 'I *am* I: Ego =Ego.'

We come here in the *Cogito, ergo sum,* of Descartes, as the basis of all certitude. The Ego posits itself, and *is* by means of this very self-positing. When I say 'I am,' I affirm, in consciousness, my existence; and this affirmation of my consciousness is the condition of my existence. The Ego is therefore at one and the same time both the activity and the product of activity; precisely as thought is both the thinking, activity, and the product thought.

'According to Idealism,' he says 'Intelligence is a *Doing* (*Thathandlung*), and absolutely nothing else; it is even incorrect to speak of it as an *Active,* for such a term points to something existing in which the activity inheres.' Here he expresses obscurely the truth that Intelligence is a Function.

There are three fundamental positions, one absolutely unconditioned, the two others relatively so. Their logical relations are Thesis, Antithesis, and Synthesis. (The famous trichotomy of Hegel's Method has its origin here). We have expounded the Thesis, the proposition of identity; let us now pass to the Antithesis, the proposition of contradiction.

The position A=A has its counter-position in Non-A is not=A. The certainty of this is not less than the certainty of its predecessor. But it is so far conditioned, that, if A did not exist, there could exist no Non-A. In knowing A, we necessarily know its opposite. Hence the Ego not only posits itself, but, in so doing, contra-posits a Non-Ego.

Here we have the ground of the fundamental truth 'No object without a subject, no subject without an object.' 'The Intelligence,' he says, 'sees itself, and this seeing of itself is directly connected with all that belongs to Intelligence; and in this union of *Being* and *Seeing* consists the nature of Intelligence. Whatever is in the Intelligence, whatever it is itself, it is *for itself*, and only thus is it Intelligence. I think this or that object. Now what does this mean, and how do I appear to myself in this thought? I produce certain conditions within myself, if the object is a mere invention; but if the objects are real, and exist without my invention, I simply contemplate as a spectator the production of these conditions within me. They are within me only so far as I contemplate them; my contemplation and their Being are inseparably united. A thing is this or that; but *for whom* is it? No one who comprehends the question will reply: For itself. He must add an Intelligence *for* which the thing is to be.'

Without an Ego there is no Non-Ego, no Object, no World. A world *per se*, a world of *Dinge an sich*, is unthinkable; but a World as Object, as Representation, as Non-Ego, is demonstrable. Without Sensibility there would be no sensibles; without Thought there would be no intelligibles.

The third position, Synthesis, unites both Thesis and Antithesis, and resolves the contradiction in a higher identity. Hence it is called the *Satz des Grundes*—the 'principle of Reason.' The Ego contra-posits the Non-Ego; but the Non-Ego supposes the Ego. The Ego thus posits itself as a contradiction, or, what is equivalent, posits itself as the unity of contra-positions. But the union of contra-positions in one subject is contradictory. The Ego is therefore posited as a Contradiction. It is this Contradiction in virtue of its nature. (Here we see Hegel's standing-point.) But every contradiction demands a solution. Thus in the Ego there is needed a *Doing* (*Thathandlung*), which solves the two preceding *Doings*; and this is the Synthesis.

The great point Fichte has endeavoured to establish is the identity of being and thought—of existence and consciousness—of object and subject. And he establishes this by means of the Ego considered as essentially an activity.

Hence the conclusion drawn in the practical part of his philosophy, that the true destination of man is not thought, but action, which is thought realized. 'I am free,' he says. That is the revelation of consciousness. 'I am free; and it is not merely my action, but the free determination of my will to obey the voice of conscience, that decides all my worth. More brightly does the everlasting world now rise before me; and the fundamental laws of its order are more clearly revealed to my mental sight. My *will alone*, lying hid in the obscure depths of my soul, is the first link in a chain of consequences stretching through the invisible realms of spirit, as in this terrestrial world the action itself, a certain movement communicated to matter, is the first link in a material chain of cause and effect, encircling the whole system. The will is the efficient cause, the living principle of the world of spirit, as motion is of the world of sense. I stand between two worlds, the one visible, in which the act alone avails, and the intention matters not at all; the other invisible and incomprehensible, acted on only by the will. In both these worlds I am an effective force. The Divine life, as alone the finite mind can conceive it, is self-forming, self-representing will, clothed, to the mortal eye, with multitudinous sensuous forms, flowing through me and through the whole immeasurable universe—here streaming through my veins and muscles, there pouring its abundance into the tree, the flower, the grass. The dead, heavy mass of inert matter, which did but fill up nature, has disappeared, and, in its stead, there rushes by the bright, everlasting flood of life and power, from its Infinite Source.

'The Eternal Will is the Creator of the world, as he is the Creator of the finite reason. Those who will insist that the world must have been created out of a mass of inert matter, which must always remain inert and lifeless, like a vessel made by human hands, know neither the world nor Him. The Infinite Reason alone exists in himself—the finite in him; in our minds alone has he created a world, or at least that by and through which it becomes unfolded to us. In his light we behold the light, and all that it reveals. Great, living Will! whom no words can name, and no conception embrace! well may I lift up my thoughts to thee, for I can think only in thee! In thee, the Incomprehensible, does my own existence, and that of the world, become comprehensible to me; all the problems of being are solved, and the most perfect harmony reigns! I veil my face before thee, and lay my finger on my lips!'

The ground-principles of Fichte's idealism having been given, we have now to see how he avoids the natural objections which rise against such a doctrine. But first let us notice how this deification of personality was at once the most natural product of such a mind as Fichte's, and the best adapted to the spirit of the age which produced it. His doctrine was an inspiration of that ardent and exalted spirit which stirred the heart of Germany, and made the campaign of 1813 an epoch in history. Germany then was deficient in energetic will. It had armies, and these armies were headed by experienced generals. But among them there was scarcely another, beyond the impetuous Blücher, who had steadfast will. They were beaten and beaten. At length they were roused. A series of insults had roused them. They rose to fight for fatherland, and in their ranks was Fichte, who by deed as well as doctrine sought to convince them that in Will lay man's divinity.

The question being, *What is the relation of Object and Subject?* and Fichte's solution being *Object and Subject are identical,* it followed from his position that inasmuch as an Object and a Subject—a Non-Ego and an Ego—were given in knowledge, and the distinction between them by all men supposed to be real, the origin of this distinction must arise in one of two ways: either the Ego must posit the Non-Ego, wilfully and consciously (in which case mankind would never suppose the distinction to be a real distinction); or else the Ego must cause the Non-Ego to be, and must do so necessarily and unconsciously.

How does Fichte solve the problem? He assumes that the existence of the very Ego itself is *determined* by the Non-Ego; and in this way: To be, and to be conscious, are the same. The existence of the Ego depends upon its consciousness. But to be conscious of Self is at the same time to be conscious of Not-Self; the correlates Self and Not-Self are given in the same act of consciousness. But how is it that we attribute reality to Not-Self? Just as we attribute reality to Self, namely, by an act of Consciousness. Not-Self is given in Consciousness as a *reality*, and therefore we cannot suppose it to be a phantom.

We may pause here to remark how all the witticisms against Idealism fall to the ground. The wits assume that when it is said the World is produced by the Ego, this World must be held as a phantom. Now nobody ever believed that external objects had no reality; the only possible doubt is as to whether they have any reality *independent* of mind.

In consciousness we have a twofold fact, namely, the fact of Self, and the fact of Not-Self, indissolubly given in one. We conclude therefore that Consciousness—that the Ego—is partly self-determined, and partly determined by not-self. Let us suppose the entire reality of the Ego (that is, in its identity of Subject and Object) represented by the number ten. The Ego, conscious of five of its parts—or, to speak with Fichte, *positing* five—does by that very act posit five parts *negatively* in itself. But how is it that the Ego can posit a negation in itself? It does so by the very act of Consciousness; in the act of separating five from ten, the five remaining are left passive. The negation is therefore the passivity of the Ego. This seems to lead to the contradiction that the Ego, which was defined as an Activity, is at the same time active and passive. The solution of this difficulty is that it is Activity which determines Passivity, and reciprocally. Let us suppose the absolute reality as a Sphere; this is entirely in the Ego, and has a certain quantity. Every quantity less than this totality will, of necessity, be negation, passivity. In order that a less quantity should be compared with the totality and so opposed to it, it is necessary there should be some relation between them; and this is in the idea of divisibility. In the absolute totality, as such, there are no parts; but this totality may be compared with parts and distinguished from it. Passivity is therefore a determinate quantity of Activity, a quantity compared with the totality. In regard to the Ego as absolute, the Ego as limited is passive; in the relation of Ego as limited to the Non-Ego, the Ego is active and the Non-Ego passive. And thus are activity and passivity reciprocally determined.

The result of this and much more reasoning, is the hypothesis that when mankind attribute to objects a real existence they are correct; but they are incorrect in supposing that the Object is independent of the Subject; it is identical with the Subject. The common-sense belief is therefore correct enough. It is when we would rise above this belief, and endeavour to philosophize, that we fall into error. All the philosophers have erred, not in assuming the *reality* of objects but in assuming the reality of *two* distinct, disparate existences, Matter and Mind; whereas we have seen that there is only one existence, having the twofold aspect of Object and Subject.

Nor is the distinction unimportant. If Dualism be accepted, we have no refuge from Scepticism. If we are to believe that *Dinge an sich* exist—that Matter exists independently of Mind, exists *per se*—then, says Philosophy, are we doomed to admit only a possible knowledge of phenomena. The things in themselves we can never know; we can only know their effects upon us. Our knowledge is relative, and never can embrace the absolute truth.

But if Idealism be accepted, the ordinary belief of men is not only respected, but confirmed; for this belief is, that we *do* know things in themselves, and that the things we know *do* exist. The Dualist forces you to admit that you *cannot* know things in themselves; and that your belief in their existence is merely the postulate of your Reason and is not *immediately* given in the facts of Consciousness. The Idealist, on the contrary, gives you an *immediate* knowledge of things in themselves, consequently opens to you the domain of absolute Truth. He only differs from you in saying that these things, which you immediately know, are part and parcel of yourself; and it is *because* you and they are indissolubly united, that immediate knowledge is possible.

'But,' says Realism, 'I know that objects are altogether independent of *me.* I did not create them. I found them there *out* of me. The proof of this is that if, after looking at a tree, I turn away, or shut my eyes, the image of the tree is annihilated, but the tree itself remains.'

'No,' answers Idealism, 'the tree itself does not remain: for the tree is but a phenomenon, or collection of phenomena; the tree is a Perception, and all perceptions are subjective. You suppose that every one must admit that our *perceptions* are different from their *objects.* But are they different? That is precisely the question at issue; and you assume it. Let us be cautious. What is an object—a tree, for instance? Tell me, what does your Consciousness inform you of? Let me hear the fact, the whole fact, and no *inference* from the fact. Is not the *object* (tree) one and the same as your *perception* (tree)? Is not the tree a mere name for your perception? Does not your Consciousness distinctly tell you that the Form, Colour, Solidity, and Smell of the Tree are *in you*—are affections of your Subject?'

'I admit that,' replies Realism; 'but although these are *in me,* they are caused by something *out of me.* Consciousness tells me that very plainly.'

'Does it so? I tell you that Consciousness has no such power. It can tell you of its own changes; it cannot transcend itself to tell you anything about that which causes its changes.'

'But I am irresistibly compelled to believe,' says Realism, 'that there are things which exist *out* of me; and this belief, because irresistible, is true.'

'Stop! you run on too fast,' replies Idealism; 'your belief is not what you describe it. You are not irresistibly compelled to believe that things exist, which said things lie *underneath* all their appearances, and must ever remain unknown. This is no instinctive belief; it is a philosophic inference. Your belief simply is, that certain things, coloured, odorous, extended, sapid, and solid, exist; and so they do. But you infer that they exist *out* of you? Rash inference. Have you not admitted that colour, odour, taste, extension, etc., are but modifications of your sentient being; and if they exist *in* you, how can they exist *out* of you? They do not: they seem to do so by a law of the mind which gives objectivity to our sensations.'

'Try your utmost to conceive an object as anything more than a synthesis of perceptions. You cannot. You may infer, indeed, that a *substratum* for all phenomena exists, although unknown, unknowable. But on what is your inference grounded? On the impossibility of conceiving the existence of qualities—extension, colour, etc.—apart from some substance *of which* they are qualities. This impossibility is a figment. The qualities have no need of an objective substratum, because they have a *subjective* substratum: they are the modifications of a sensitive subject; and the synthesis of these modifications is the only substratum of which they stand in need. This may be proved in another way. The qualities of objects, it is universally admitted, are but modifications of the subject: these qualities are *attributed to* external objects; they are dependent upon the subject for their existence; and yet, to account for their existence, it is asserted that some unknown external substance must exist as a substance in which they must inhere. Now it is apparent that inasmuch as these qualities are subjective and dependent upon the subject for their existence, there can be no necessity for an object in which they must inhere.'

Fichte answers the argument of Realism, that there must be some ground or reason for every sensation, and this ground is what we call Object, by asking: 'But how do you know, or how can you prove to me, that a ground is necessary? Why not rest contented with the fact that something *is*, instead of presupposing that it must have *become* through some foreign source? You have been wont to *think a ground* to everything, but forget that the ground itself is *your thinking*.'

We may here call attention to the obscure and defective exposition which Fichte gives of the Non-Ego, and which, Hegel truly remarks, carries him no way beyond Kant's *Ding an sich*. Fichte says the Non-Ego is neither a real ground, nor a thing *per se*, but simply an object—a representation. It *is* not the real ground of the affection of the Ego, otherwise it would be a thing *per se*; but it must be represented or imagined as such. This representation the Ego necessarily produces from itself—it is the *productive imagination* which posits it.* Who does not recognize Kant in this?

The Ego is essentially active; it must reflect on its activity, and thereby produce a new activity; on which in turn it reflects. Each of these reflexions was an elevation. First it reflects on its primitive activity, and finds itself limited. Next it reflects on its sensations, and raises itself to Intuition; reflects on its Intuition, and images what it intuites; reflects on its Imagination, and understands what it images; reflects on its Representations, and judges what it represents; finally, reflects on its Judging Faculty, and grasps it as the Power of Abstraction—as pure subjectivity, as the Ego which is only determined by itself.

But all these reflexions, limitations, are due to what he calls an Appulse (*Anstoss*). Whence this? He is silent. He assumes, he does not deduce, it. Hegel therefore remarks that 'the *Anstoss* remains an unknown External, and the Ego a conditioned, which has another opposed to it. Thus

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* *Grundlage der Wissenschaftslehre*, ii. § 4.

Fichte remains at the stand-point of Kant, namely, that we can only know the finite, the infinite lying beyond the reach of thought. What Kant calls the *Ding an sich* is with Fichte the Appulse from without, the abstraction of some other than the Ego, which has no other office than that of being a negative.*

Greatly as Fichte's Idealism differs from Berkeley's we see in his postulate of an Appulse a close affinity with Berkeley's Action of the Deity. There is a further resemblance in the conception of the Absolute Ego—the Supreme Subject, of which the universe is the Object. For in spite of much that Fichte has written, and the equivocalness of his language throughout, it is certain that he, no less than Berkeley, repudiated the monstrous though logical conclusion that only the individual Ego and its world existed. Such a conclusion is indeed rigorous if the basis of Consciousness be rigorously accepted. If nothing exists except my thoughts, then no other mind can exist beyond my thought of it. The ground we have for believing in the existence of other minds is not a whit stronger than the ground for believing in the existence of other bodies. But this sublime Egoism is too repugnant to Reason; it must therefore be escaped; and how? Berkeley escapes by assuming a Deity, and his mode of acting on our minds. Fichte escapes by assuming an Absolute Ego—the *reine Form der Ichheit welche noch nicht Individuum ist*—the pure Essence of Reason. Thus, in a new sense, is man the image of God. An image only; and, as far as Philosophy can teach us, destined to disappear, and return to its original source; only the Moral Life is immortal; we live hereafter in our beneficence; we perish as individuals.

I do not pause to point out the incoherence of this doctrine with its principles, nor indeed to discuss those principles; enough has been done if the system itself has been presented intelligibly.

To exhibit Fichte's Idealism is, strictly speaking, all that my plan imposes; but although his philosophical doctrines are all founded upon it, and although it was the doctrine which made an epoch in German Philosophy, consequently the doctrine which entitles him to a place in this History, nevertheless I should be doing him injustice and misleading my readers if I did not give some glimpse of his moral system.*

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* HEGEL: *Encyklopädie*, § 60, p. 124.

§ IV. Application of Fichte's Idealism.

The Ego is essentially an Activity; consequently free. But this free activity would lose itself in infinity, and would remain without consciousness—in fact, without existence—did it not encounter some *resistance.* In the effort to vanquish this resistance, it exerts its Will, becomes conscious of something not itself, and *thereby* becomes conscious of itself. But resistance limits freedom, and as an Activity the Ego is essentially free—it is irresistibly impelled to enjoy perfect freedom. This expansive force, which impels the Ego to realize itself by complete development, and thereby assimilate the Non-Ego—this force, in as far as it is not realized, is the *aim* of man's existence—it is his duty.

Here a difference from the ordinary schools of morality begins to show itself. Duty is not a moral obligation which we are free to acknowledge or reject; it is a pulse beating in the very heart of man—a power inseparable from his constitution; and according to its fulfilment is the man complete.

The world does not exist because we imagine it, but because we *believe* it. Let all reality be swept away by scepticism—we are not affected. Man is impelled by his very nature to realize his existence by his acts. Our destination is not thought, but action. Man is not born to brood over his thoughts, but to manifest them—to give them existence. There is a moral world *within*; our mission is to transport it *without*. By this we create the world. Socrates escaped the scepticism to which Philosophy had irresistibly led by seeking a solution of the problem in Conscience. In like manner, Fichte led by Kant's philosophy to Idealism, and, dissatisfied with the mere phantom-world * of Intelligence, sought a solution in the real world of Action. The Moral Force was to supply what the Intellect could only see. God creates the world in creating Conscience. The world only exists in us and by us. When we die *it* vanishes, not we; we pass into another world, the product of our moral life.

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* Those who are curious to see what he himself makes of his system are referred to his *Wissenschaftslehre* (of which a French translation by M. Paul Grimblot exists under the title of *Doctrine de la Science,* and an English one by Kroeger, published in America), or, as a more popular exposition, to his *Bestimmung des Menschen,* a French translation of which has been published by M. Barchou de Penhoen, under the title *Destination de l'Homme,* which, from the character and learning of the translator, is, we have no doubt, an excellent version. An English translation has also been made by Mrs. Percy Sinnett, which can be recommended. *The Nature of the Scholar* and *The Characteristics of the Present Age* have also been translated by Mr. W. Smith.

Our world is not a visionary world simply because its existence is within us; action makes it real. For what is the condition of existence?—what determines Thought to *be*? Simply that it should realize itself as an object. The Ego *as simple Subject* does not exist; it has only a potentiality of existence. To exist, it must realize itself and become *Subject-Object.*

Mark the consequence:—Knowing that we carry within us the moral world, and that upon ourselves alone depends the attainment of so sublime an object as the manifestation of this world, it is to ourselves alone that we must direct our attention. This realization of the world, what is it but the complete development of ourselves? If we would *be*, therefore —if we would enjoy the realities of existence—we must develope ourselves in the attempt to realize incessantly the beautiful, the useful, and the good. Man is commanded to be moral by the imperious necessity of his own nature. To be virtuous is not to obey some external law, but to fulfil an internal law: this obedience is not slavery, but freedom; it is not sacrificing one particle of freedom to any other power, but wholly and truly realizing the power within us of being free.

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* 'Was durch das Wissen, und aus dem Wissen entsteht, ist nur Wissen. Alles Wissen ist aber nur Abbildung, und es wird in ihm immer etwas gefodert, das dem Bilde entspreche. Diese Foderung kann durch kein Wissen befriedigt werden . . . denn diese ganze Sinnenwelt entsteht nur durch das Wissen, und ist selbst unser Wissen; aber Wissen ist nicht Realität, eben darum weil es Wissen ist.'—*Die Bestimmung des Menschen.* Buch II.

Life is a combat. The free spirit of man, inasmuch as it is finite, is limited, imperfect; but it incessantly struggles to subjugate that which opposes it—it tends incessantly towards infinity. Defeated in his hopes, he is sometimes discouraged, but this lasts not long. There is a well-spring of energy for ever vital in the heart of man; an ideal is for ever shining before him, and that he must attain.

Man knows himself to be free; knows also that his fellow-men are free; and therefore the duty of each is to treat the others as beings who have the same aim as himself. Individual liberty is therefore the principle of all government; from it Fichte deduces his political system.

And what says Fichte respecting God? He was, as we know, accused of atheism. Let us hear his real opinions. In his answer to that charge we have an abstruse, but at the same time positive, exposition of his views.* The common view is, that God created the world out of an inert mass of matter; and from the evidence of design in this created world we infer an intelligent designer. Fichte could not accept this view. In the first place, what we call the World is but the incarnation of our Duty (*unsere Welt ist das versinnlichte Material unserer Pflicht*). It is the objective existence of the Ego: we are, so to speak, the creators of it. Such a statement *looks* very like atheism, especially when Fichte's system is not clearly apprehended: it is, however, at the worst, only Acosmism.

Nor could Fichte accept the evidence of Design, because Design is a mere conclusion of the understanding, applicable only to finite, transient things, wholly inapplicable to the infinite: Design itself is but a subjective notion.†

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* *Gerichtliche Verantwortungsschriften gegen die Anklage des Atheismus.*

† *Ibid.* p. 43.

'God,' says Fichte, 'must be *believed* in, not *inferred.* Faith is the ground of all conviction, scientific or moral. Why do you believe in the existence of the world? It is nothing more than the incarnation of that which you carry within you, yet you believe in it. In the same way God exists in your Consciousness, and you believe in him. He is the Moral Order (*moralische Ordnung*) of the world: as such we can know him, and only as such. For if we attempt to attribute to him Intelligence or Personality, we at once necessarily fall into anthropomorphism. God is infinite: therefore beyond the reach of our *science*, which can only embrace the finite, but not beyond our *faith.*'*

By our efforts to fulfil our Duty, and thus to realize the Good and Beautiful, we are tending towards God, we live in some measure the life of God. True religion is therefore the realization of universal reason. If we were all perfectly free, we should be one; for there is but one Liberty. If we had all the same convictions, the law of each would be the law of all, since all would have but one Will. To this we aspire; to this Humanity is tending.

The germ of mysticism which lies in this doctrine was fully developed by some of Fichte's successors, although he himself had particularly guarded against such an interpretation, and distinguishes himself from the mystics.

Let us now pass to Fichte's Philosophy of History.

The historian only accomplishes half of the required task. He narrates the events of an epoch, in their order of occurrence, and in the form of their occurrence; but he cannot be assured that he has not omitted some of these events, or that he has given them their due position and significance. The philosopher must complete this incomplete method. He must form some idea of the epoch—an Idea *à priori*, independent of experience. He must then exhibit this Idea always dominant throughout the epoch—and manifesting itself in all the multiplicity of facts, which are but its incarnation.

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* *Sittenlehre*, pp. 189, 194.

What is the world but an incarnation of the Ego? What is an epoch but an incarnation of an Idea?

Every epoch has therefore its pre-existent Idea. And this Idea will be determined by the Ideas of the epochs which have preceded it; and will determine those which succeed it. Hence we conclude that the evolutions of Ideas—or the History of the World—is accomplished on a certain *plan*. The philosopher must conceive this plan in its totality, that he may from it deduce the Ideas of the principal epochs in the history of Humanity, not only as past, but as future.

The question first to be settled is this: What is the ground-plan of the world? or, in other words, according to Fichte, What is the fundamental Idea which Humanity has to realize?

The answer is: The Idea of Duty. This, in its concrete expression, is: To fix the relations of man to man in such order that the perfect liberty of each be compatible with the liberty of the whole.

History may thus be divided into two principal epochs. The one, in which man has not established the social relations on the basis of reason. The other, in which he has established them, and knows that he has done so.

That Humanity exists but for the successive and constant realization of the dictates of reason is easily proved. But sometimes Humanity has knowledge of what it performs, and why it performs it; sometimes it obeys but a blind impulse. In this second case, that is to say, in the first epochs of the terrestrial existence of Humanity, Reason, although not manifesting itself distinctly, consciously, nevertheless exists. It manifests itself as an instinct, and appears under the form of a natural law; it manifests itself in the intelligence only as a vague and obscure sentiment. Reason, on the contrary, no sooner manifests itself as Reason, than it is gifted with consciousness of itself and its acts. This constitutes the second epoch.

But Humanity does not pass at once from the first to the second epoch. At first Reason only manifests itself in a few men, the Great Men of their age, who thereby acquire authority. They are the instructors of their age; their mission is to elevate the mass up to themselves. Thus Instinct diminishes, and Reason supervenes. Science appears. Morality becomes a science. The relations of man to man become more and more fixed in accordance with the dictates of reason.

The entire life of Humanity has five periods. I. The domination of Instinct over Reason: this is the primitive age. II. The general instinct gives place to an external dominant Authority: this is the age of doctrines unable to convince, and employing force to produce a blind belief, claiming unlimited obedience; this is the period in which Evil arises. III. The Authority, dominant in the preceding epoch, but constantly attacked by Reason, becomes weak and wavering: this is the epoch of scepticism and licentiousness. IV. Reason becomes conscious of itself; truth makes itself known; the science of Reason developes itself: this is the beginning of that perfection which Humanity is destined to attain. V. The science of Reason is applied: Humanity fashions itself after the ideal standard of Reason: this is the epoch of Art, the last term in the history of our species.

CHAPTER II.

SCHELLING.

§ I. Life of Schelling.

FREDERICK WILLIAM JOSEPH SCHELLING was born in Leonberg, in Würtemberg, January 27, 1775. At the University in Tübingen he first knew Hegel; their friendship was enduring and productive. At Leipzig he studied Medicine and Philosophy; in the latter he became the pupil of Fichte; he afterwards filled Fichte's vacant chair at Jena, where he lectured with immense success. In 1807 he was made a member of the Munich Academy of Sciences. And in Bavaria, honoured, rewarded, and ennobled, he remained till 1842, when the King of Prussia seduced him to Berlin; and there, in the chair once held by Hegel, he opened a series of lectures, in which he was to give the fruit of a life's meditation.

His appearance at Berlin was the signal for violent polemics. The Hegelians were all up in arms. Pamphlets, full of personalities and dialectics, were launched against Schelling, apparently without much effect. His foes at length grew weary of screaming; and he continued quietly to lecture. In 1845 I had the gratification not only of hearing him lecture on Mythology to large audiences, but also of hearing him in the expansiveness of private conversation pour forth his stores of varied knowledge. His intellectual vigour was such, that although seventy summers had whitened his hair, he seemed to have still a long lease of life; and indeed he continued nine years longer to inspire the respect of all who
1 knew him. He died on August 20, 1854.

§ II. SCHELLING'S DOCTRINES.

Schelling is often styled the German Plato. In such parallels there is always some truth amidst much error. Schelling's works unquestionably exhibit great power of vivid imagination conjoined with subtle dialectics; if on this ground he is to be styled a Plato, then are there hundreds to share that title with him. His doctrines have little resemblance to those of his supposed prototype. Curiously enough, his head was marvellously like that of Socrates; not so ugly, but still very like it in general character.

Schelling may be regarded as having been the systematizer of a tendency, always manifesting itself (it had not escaped the observation of Tacitus), but then in full vigour in Germany —the tendency towards Pantheism. This tendency may be recognized in the clear Goethe, no less than in the mystical Novalis. In some way or other, Pantheism seems the natural issue of almost every Metaphysic of Religion, when rigorously carried out; but Germany, above all European countries, has, both in poetry and speculation, the most constantly reproduced it. Her poets, her artists, her musicians, and her thinkers, have been more or less Pantheists. Schelling's attempt, therefore, to give Pantheism a scientific basis could not but meet with hearty approbation.

We may here once more notice the similarity, in historical position, of the modern German speculations to those of the Alexandrian Schools. In both the incapacity of Reason to solve the problems of Philosophy is openly proclaimed; in both some higher faculty is called in to solve them. Plotinus called this faculty *Ecstasy*. Schelling called it the *Intellectual Intuition.* The Ecstasy was not supposed to be a faculty possessed by all men, and at all times; it was only possessed by the few, and by them but sometimes. The Intellectual Intuition was not supposed to be a faculty common to all men; on the contrary, it was held as the endowment only of a few of the privileged: it was the faculty for philosophising.

Schelling expresses his disdain for those who talk about not comprehending the highest truths of Philosophy. 'Really,' he exclaims, 'one sees not wherefore Philosophy should pay any attention whatever to Incapacity. It is better rather that we should isolate Philosophy from all the ordinary routes, and keep it so separated from ordinary knowledge that none of these routes should lead to it. Philosophy commences where ordinary knowledge terminates.' * The highest truths of science cannot be proved, they must be apprehended; for those who cannot apprehend them there is nothing but pity: argument is useless.

After this, were we to call Schelling the German Plotinus, we should perhaps be nearer the truth than in calling him the German Plato. But it was for the sake of no such idle parallel that we compared the fundamental positions of each. Our object was to 'point a moral,' and to show how the same forms of error reappear in history, and how the labours of so many centuries have not advanced the human mind in this direction one single step.

The first point to be established is the nature of Schelling's improvement upon Fichte: the relation in which the two doctrines stand to each other.

Fichte's Idealism was purely subjective Idealism. The Object had indeed reality, but was solely dependent upon the Subject. Endeavour as we might, we could never separate the Object from the Subject, we must never conceive a possible mode of existence without being forced to identify with it a Subject. Indeed the very conception itself is but an act of the Subject. Admitting that we are forced by the laws of our mental constitution to postulate an unknown something, a Noumenon, as the substance in which all phenomena inhere, what, after all, is this postulate? It is an act of the Mind; it is wholly subjective; the necessity for the postulate is a mental necessity. The Non-Ego therefore is the product of the Ego.

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* *Neue Zeitschrift für speculative Physik*, ii. 34.

There is subtle reasoning in the above; nay more, it contains a principle which is irrefutable: the principle of the identity of Object and Subject in knowledge. This Schelling adopted. Nevertheless, in spite of such an admission, the nullity of the external world was too violent and repulsive a conclusion to be long maintained; and it was necessary to see if the principle of identity might not be preserved, without forcing such a conclusion.

The existence of the objective world is as firmly believed in as the existence of the subjective: they are, indeed, both given in the same act. We cannot be conscious of our own existence without at the same time inseparably connecting it with some other existence from which we distinguish ourselves. So in like manner we cannot be aware of the existence of anything out of ourselves without at the same time inseparably connecting with it a consciousness of ourselves. Hence we conclude that both exist; not indeed separately, not independently of each other, but *identified* in some higher power. Fichte said that the Non-Ego was created by the Ego. Schelling said that the two were equally real, and that both were identified in the Absolute.

Knowledge must be knowledge of something. Hence knowledge implies the correlate of Being. Knowledge without an Object known, is but an empty form. But Knowledge and Being are correlates; they are not separable; they are identified. It is as impossible to conceive an Object known without a Subject knowing, as it is to conceive a Subject knowing without an Object known.

Nature is Spirit visible; Spirit is invisible Nature:* the absolute Ideal is at the same time the absolute Real.

Hence Philosophy has two primary problems to solve. In the *Transcendental Philosophy* the problem is to construct Nature from Intelligence—the Object from the Subject. In the *Philosophy of Nature* the problem is to construct Intelligence from Nature—the Subject from the Object.* And how are we to construct one from the other? Fichte has taught us to do so by the principle of the identity of Subject and Object, whereby the productivity and the product are in constant opposition, yet always one. The productivity (*Thätigkeit*) is the activity in act; it is the force which developes itself into all things. The product is the activity arrested and solidified into a fact; but it is always ready to pass again into activity. And thus the world is but a balancing of contending powers within the sphere of the Absolute.

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* Our readers will recognize here a favourite saying of COLERIDGE, many of whose remarks, now become famous, are almost *verbatim* translations from SCHELLING and the two SCHLEGELS.

In what, then, does Schelling differ from Fichte, since both assert that the product (Object) is but the arrested activity of the Ego? In this: the Ego in Fichte's system is a finite Ego—it is the human soul. The Ego in Schelling's system is the Absolute—the Infinite—the All which Spinoza called Substance; and this Absolute manifests itself in two forms: in the form of the Ego and in the form of the Non-Ego—as Nature and as Mind.

The Ego produces the Non-Ego, but not by its own force, not out of its own nature; it is universal Nature which works within us and which produces from out of us; it is universal Nature which here in us is conscious of itself. The souls of men are but the innumerable individual eyes with which the Infinite World-Spirit beholds himself.

What is the Ego? It is one and the same with the act which renders it an Object to itself. When I say 'myself'—when I form a conception of my Ego, what is that but the Ego making itself an Object? Consciousness therefore may be defined the objectivity of the Ego. Very well; now apply this to the Absolute. He, too, must be conscious of himself, and for that he must realize himself objectively. We can now understand Schelling when he says, 'The blind and unconscious products of Nature are nothing but unsuccessful attempts of Nature to make itself an Object (*sich selbst zu reflectiren*); the so-called dead Nature is but an unripe Intelligence. The acme of its efforts—that is, for Nature completely to objectize itself—is attained through the highest and ultimate degree of reflection in Man—or what we call *Reason.* Here Nature returns into itself, and reveals its identity with that which in us is known as the Object and Subject.' *

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* *System des transcendentalen Idealismus*, p. 7.

This function of Reason is elsewhere more distinctly described as the total *indifference-point* of the subjective and objective. The Absolute he represents by the symbol of the magnet. Thus, as it is the same principle which divides itself in the magnet into the north and south poles, the centre of which is the indifference-point, so in like manner does the Absolute divide itself into the Real and Ideal, and holds itself in this separation as absolute indifference.† And as in the magnet every point is itself a magnet, having a North pole, a South pole, and a point of indifference, so also in the Universe, the individual varieties are but varieties of the eternal One. Man is a microcosm.

Reason is the indifference-point. Whoso rises to it rises to the *reality* of things (*zum wahren Ansich*), which reality is precisely in the indifference of Object and Subject. The basis of Philosophy is therefore the basis of Reason; its knowledge is a knowledge of things as they are, i.e. as they are in Reason. ‡

The spirit of Plotinus revives in these expressions. We have in them the whole key-stone of the Alexandrian School. The Intellectual Intuition by which we are to embrace the Absolute, is, as before remarked, but another form of the Alexandrian Ecstasy. Schelling was well aware that the Absolute, the Infinite as such, could not be known under the conditions of finity, cannot be known in personal consciousness. How, then, can it be known? By some higher faculty which discerns the identity of Object and Subject—

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* *System des transcendentalen Idealismus*, p. 5.

† Hence SCHELLING's philosophy is often styled the Indifference Philosophy.

‡ *Zeitschrift für speculative Physik*, vol. ii. Heft 2.

which perceives the Absolute as Absolute, where all difference is lost in indifference.

There are three divisions in Schelling's system: the philosophy of Nature, the transcendental philosophy, and the philosophy of the Absolute.

His speculations with respect to Nature at first met with considerable applause in Germany. Ingenious they certainly are, but vitiated in Method; incapable of verification. Those who are curious to see what he makes of Nature are referred to his *Zeitschrift für speculative Physik*, and his *Ideen zu einer Philosophie der Natur.* The following examples will serve to indicate the character of his speculations.*

Subject and Object being identical, the absolute Identity is the absolute totality named Universe. There can be no difference except a *quantitative* difference; and this is only conceivable with respect to individual existences. For the absolute Identity is *quantitative indifference* both of Object and Subject, and is only under this form. If we could behold all that is, and behold it in its totality, we should see a perfect quantitative equality. It is only in the scission of the Individual from the Infinite that quantitative difference takes place. This difference of Object and Subject is the ground of all finity: and, on the other hand, quantitative indifference of the two is Infinity.

That which determines any difference is a Power (*Potenz*), and the Absolute is the Identity of all Powers (*aller Potenzen*). All matter is originally liquid; *weight* is the power through which the Attractive and Expansive force, as the immanent ground of the reality of Matter, operates. Weight is the first *Potenz.* The second *Potenz* is Light—an inward intuition of Nature, as weight is the outward intuition. Identity with light is Transparency. Heat does not pertain to the nature of Light, but is simply a *modus existendi* of Light.

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* The reader must not complain if he do not understand what follows: intelligibility is not the characteristic of German speculation; and we are here only translating SCHELLING's words, without undertaking to enlighten their darkness.

Newton's speculations upon Light are treated with disdain, as a system built upon illogical conclusions, a system self-contradictory, and leading to infinite absurdities. Nevertheless this absurd system has led men to many discoveries: it is the basis of a gradually advancing science; while the views of Schelling lead to nothing except disputation. Thus with regard to his explanation of Electricity: let us suppose it exact, and we must still acknowledge it to be useless. It admits of no verification; admits of no application. It is utterly sterile.

There are indeed general ideas in his *Natur-Philosophie*, which not only approach the conceptions of positive science, but have given a powerful stimulus to many scientific intellects. The general law of polarity, for example, which he makes * the law of universal nature, is seen illustrated in physics and chemistry; although the presumed relation between heat and oxygen, which he makes the basis of all atomic changes, no chemist will nowadays accept. When, in the second part of this treatise, he theorizes on organic life, the result is similar, namely some general ideas which seem luminous are enforced by particular ideas certainly false. He maintains that vegetation and life are the products of chemical action: the first consisting in a continual deoxidation, the second in a continual oxidation; as soon as this chemical action ceases, death supervenes, for living beings exist only in the moment of *becoming*.† He only expresses the universally accepted idea of life when he makes it depend on the incessant disturbance and re-establishment of an equilibrium,‡ or, as De Blainville defines it, 'a continual movement of decomposition and recomposition.'

All the functions of Life are but the individualizations of one common principle; and all the series of living beings are but the individualizations of one common Life: this is the *Weltseele*, or *anima mundi*. The same idea had been expressed by Goethe, and has since been presented under various forms by Oken and many German naturalists. The idea of a dynamic progression in Nature, is also the fundamental idea in Hegel's philosophy.

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* *Von der Weltseele*, 25 *sq.* † *Ibid.* p. 181. ‡ *Ibid.* p. 284.

Schelling, in his *Jahrbücher der Medicin*, says that Science is only valuable in as far as it is *speculative*; and by speculation he means the contemplation of God as He exists. Reason, inasmuch as it affirms God, cannot affirm anything else, and annihilates itself at the same time as an *individual* existence, as anything *out of* God. Thought (*das Denken*) is not my Thought; and Being is not my Being; for everything belongs to God or the All. There is no such thing as a Reason which *we have*; but only a Reason that *has us*. If nothing exists out of God, then must the knowledge of God be only the infinite knowledge which God has of himself in the eternal Self-affirmation. God is not the highest, but the only One. He is not to be viewed as the summit or the end, but as the centre, as the All in All. Consequently there is no such thing as a being lifted up to the knowledge of God; but the knowledge is *immediate* recognition.

If we divest Schelling's speculations of their dialectical forms, we shall arrive at the following results:—

Idealism is one-sided. Beside the Subject there must exist an Object: the two are identical in a third, which is the Absolute. The Absolute is neither Ideal nor Real—neither Mind nor Nature—but both. This Absolute is God. He is the All in All; the eternal source of all existence. He realizes himself under one form as an objectivity; and under a second form as a subjectivity. He becomes conscious of himself in man: and this man, under the highest form of his existence, manifests Reason, and by this Reason God knows himself. Such are the conclusions to which Schelling's philosophy leads us. And now, we ask, in what does this philosophy differ from Spinozism?

The Absolute, which Schelling assumes as the indifference-point of Subject and Object, is but the πρῶτον ἀγαθόν and primal Nothing which forms the first Hypostasis of the

Alexandrian Trinity. The Absolute, as the Identity of Subject and Object, being neither and yet both, is but the Substance of Spinoza, whose attributes are Extension and Thought.

With Spinoza also he agreed in giving only a phenomenal reality to the Object and Subject. With Spinoza he agreed in admitting but one existence—the Absolute.

But, although agreeing with Spinoza in his fundamental positions, he differed with him in Method, and in the applications of those positions. In both differences the superiority, as it seems to me, is incontestably due to Spinoza.

Spinoza deduced his system very logically from one fundamental assumption, viz. that whatever was true of ideas was true of objects. This assumption itself was not altogether arbitrary. It was grounded upon the principle of certitude, which Descartes had brought forward as the only principle which was irrefragable. Whatever was found to be distinct and *à priori* in Consciousness, was irresistibly true. Philosophy was therefore deductive ; and Spinoza deduced his system from the principles laid down by Descartes.

Schelling's Method was very different. Aware that human knowledge was necessarily finite, he could not accept Spinoza's Method, because that would have given him only a knowledge of the finite, the conditioned; and such knowledge, it was admitted, led to scepticism. He was forced to assume another faculty of knowing the truth, and this was the Intellectual Intuition. Reason which could know the Absolute was only possible by transcending Consciousness and sinking into the Absolute. As Knowledge and Being were identical, to know the Infinite, we must *be* the Infinite, i.e. must lose our individuality in the universal.

Consciousness, then, which had for so long formed the basis of all Philosophy, was thrown over by Schelling, as incompetent to solve any of its problems. Consciousness was no ground of certitude. Reason was the organ of Philosophy, and Reason was *impersonal.* The Identity of Being and Knowing took the place of Consciousness, and became the basis of all speculation. We shall see to what it led in Hegel.

Our notice of Schelling has necessarily been brief, not because he merited no greater space, but because to have entered into details with any satisfaction, would have carried us far beyond our limits. His works are not only numerous, but differ considerably in their views. All we have endeavoured to represent is the ideas which he produced as developments of Fichte, and which served Hegel as a basis.*

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* A French translation of SCHELLING's most important work, under the title of *Système de l'Idéalisme transcendental*, by P. GRIMBLOT, the translator of FICHTE, has appeared; also a version of *Bruno ; ou, Les Principes des Choses*. Nothing in English.

CHAPTER III.

HEGEL.

§ I. Life of Hegel.

GEORGE FREDERICK WILLIAM HEGEL was born at Stuttgard, the 27th of August, 1770. He received that classical education which distinguished the Würtemburg students beyond all others; and in his eighteenth year he went to Tübingen, to pursue his theological and philosophical studies. He was there a fellow-student with Schelling, for whom he contracted great esteem. The two young thinkers communicated to each other their thoughts, and discussed their favourite systems. In after-life, when opposition had sundered these ties, Hegel never spoke of this part of their connection without emotion, though both in his private letters and published works he more than once spoke contemptuously of Schelling. In his twentieth year he had to give up all his plans for a professorship, and was content (hunger impelling) to accept the place of private tutor, first in Switzerland, and subsequently in Frankfort.

Early in 1801 his father died; and the small property he inherited enabled him to relinquish his tutorship and to move to Jena, where he published his dissertation *De Orbitis Planetarum.* This work was directed against the Newtonian system of Astronomy. It was an application of Schelling's Philosophy of Nature; and in it Newton was treated with that scorn which Hegel never failed to heap upon empirics, i.e. those who trusted more to experience than to metaphysics. In the same year he published his *Difference between Fichte and Schelling,* in which he sided with the doctrines of his friend, whom he joined in editing the *Critical Journal of*

Philosophy. It is in the second volume of this Journal that we meet with his celebrated essay *Glauben und Wissen* (Faith and Knowledge), in which Kant, Jacobi, and Fichte are criticized.

At Jena he enjoyed the society of Goethe and Schiller. The former, with his usual sagacity, detected the philosophical genius which as yet lay undeveloped in Hegel; of which more may be read in Goethe and Schiller's *Correspondence.* Hegel, on the other hand, was to the last one of Goethe's staunchest admirers; and many a gleam of lustre is shed over the pages of the philosopher by his frequent quotation of the poet.

At the University of Jena, Hegel then held the post of *Privatdocent*; but his lectures had only four listeners. These four however were all remarkable men: Gabler, Troxler, Lachmann, and Zellmann. On Schelling's quitting Jena, Hegel filled his chair; but filled it only for one year. Here he published his *Phänomenologie des Geistes.* He finished writing this work on the night of the ever-memorable battle of Jena. While the artillery was roaring, the philosopher was deep in his work, unconscious of all that was going on. He continued writing, as Archimedes at the siege of Syracuse continued his scientific researches. The next morning, manuscript in hand, he steps into the streets, proceeding to his publisher's, firmly convinced that the interests of mankind are bound up with that mass of writing which he hugs so tenderly. The course of his reverie is somewhat violently interrupted; bearded and gesticulating French soldiers arrest the philosopher, and significantly enough inform him that, for the present, the interests of men lie elsewhere than in manuscripts. In spite of French soldiers, however, the work in due time saw the light, and was welcomed by the philosophical world as a new system—or rather as a new modification of Schelling's system. The editorship of the Bamberg newspaper was then offered him, and he quitted Jena. He did not long remain at Bamberg; for in the autumn of 1808 we find him Rector of the Gymnasium College at Nürnberg. He shortly after married Fräulein von Tucher, with whom he passed a happy life: she bore him two sons. In 1816 he was called to the chair of Heidelberg, and published in 1817 his *Encyklopädie der philosophischen Wissenschaften*, which contains an outline of his system. This work so exalted his reputation, that in 1818 he was called to the chair of Berlin, then the most important in Germany. He there lectured for thirteen years, and formed a school, of which it is sufficient to name its members, Gans, Rosenkranz, Michelet, Werder, Marheinecke, and Hotho.

Hegel was seized with the cholera in 1831, and after a short illness expired, in the sixty-second year of his age, on the 24th of November, the anniversary of the death of Leibnitz.

§ II. HEGEL'S METHOD.

Schelling's doctrines were never systematically co-ordinated. He was subtle, ardent, and audacious; but he disregarded precision; and stood in striking contradiction to his predecessors Kant and Fichte in his disregard of logical forms.

The effect of his teaching was felt more in the department of the philosophy of Nature than elsewhere. Crowds of disciples, some of them, as Oken and Steffens, illustrious disciples, attempted the application of his principles; and after a vast quantity of ingenious but sterile generalization, it was found that these principles led to no satisfactory conclusion.

Schelling's ideas were however very generally accepted in the philosophical world at the time Hegel appeared. These ideas were thought to be genuine intuitions of the truth; the only drawback was their want of systematic co-ordination. They were inspirations of the truth; but the demonstrations were needed. The position Hegel was to occupy became therefore very clear: he had to systematize and co-ordinate the principles of Schelling and Kant. He complained, and justly, that Schelling's Absolute rested upon no grounds of logical proof, but was 'as if shot out of a pistol.'* He undertook the logical genesis. Rejecting the conception of the Absolute as the indifference of Ideal and Real, he substituted for it the conception of an unfolding reality of the Idea. According to this view, the Absolute is a process, a dialectic movement. Hence the necessity of a demonstration that the Absolute contains within itself by the very necessity of its nature a principle of evolution from difference to difference, which differences are its *moments*. To effect this all-important position a Method was requisite, and this constitutes Hegel's glory. The nature of his contribution to philosophy, which has placed him on so high a pedestal of renown, is nothing less than the invention of a new Method.*

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* *Phänomenologie des Geistes.* Vorrede, p. 40.

The principle of this Method is the identity of two contradictories. Every conception contains within it its own negation; it is one-sided, and topples over into a second, which, not less one-sided, must sink with its opposite into a third; there both attain unity. But this synthesis of thesis and antithesis once effected, the position thus affirmed, is in turn negatived, and through negation passes onwards to a higher unity. Thus there is perpetual flux, nothing is ever fixed, definite, all is but the passing *moments* of the immanent movement. 'The universal which is the only ground of everything particular is such only in this way, that it (the universal) as such is only something one-sided, and is of itself impelled into negation of its abstract universality by means of concreter particularity (definiteness). The absolute is not a simple one something, but a system of notions which owe their origin to this self-negation of the original universal. This system of notions is then collectively in itself again an *abstractum*, that is impelled forward into negation of its merely notional (ideal) being, into reality, into the real self-subsistence of the differences (nature).' †

The first remark to be made on this famous Method is that whatever merit may be assigned to it should be passed to the credit of Fichte, as a glance at our exposition of Fichte

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* This is the claim put up by his disciple MICHELET, *Gesch. der letzten Systeme der Philos.* ii. 604–5; who declares HEGEL's method to be all that can properly be called his own. Comp. HEGEL's *Vermischte Schriften*, ii. 479.

† SCHWEGLER: *Handbook of the History of Philosophy.* Translated by J. H. STIRLING, 1867, p. 317.

(p. 560) will show. Hegel's improvement on it can hardly be said to have done more than to render the process objective as well as subjective; and this was effected by Bardili.* The second remark is that it needlessly departs from the common logic; and perplexes by its paradoxes.

Two contradictories are commonly supposed to exclude each other reciprocally: Being excludes Non-Being. This notion Hegel pronounces to be false. Everything is contradictory in itself; contradiction forms its essence: its identity consists in being the union of two contradictories. Thus Being (*Seyn*) considered absolutely—considered as unconditioned—that is to say Being in the abstract, apart from any individual thing—is the same as Nothing. Being is therefore identical with its negation. But to conclude that there is not Being, would be false: for the abstract Nothing (*Nichts*) is at the same time the abstract Being. We must therefore unite these two contraries, and in so doing we arrive at a middle term—the realization † of the two in one, and this is *conditioned* Existence—it is the world.

Here is another example: in pure light,—that is, light without colour or shadow,—we should be totally unable to see anything. Absolute clearness is therefore identical with absolute obscurity—with its negation, in fact; but neither clearness nor obscurity are complete alone: by uniting them we have clearness mingled with obscurity; that is to say, we have Light properly so called.

Hegel thus, instead of allowing himself to be worsted by the arguments derived from the contradictions to which the identity of Being and Knowing was exposed, at once met the difficulty by declaring that the identity of contradictories was the very condition of all Being; without a contrary nothing could come into being. This logical audacity has astounded many, who proclaim this feat worthy of immortal

* See Bardili und Reinhold: *Briefwechsel über das Wesen der Philosophie*, pp. 51 *sq.*

† The original word is *Werden*—the *becoming*. It is much used in German speculation to express the transition from Non-being to Being.

glory. A new light seemed to be thrown upon the world: a new aspect was given to all existences. Being was at the same time Non-Being. Light was also Darkness, and Darkness was also Light.

Hegel is perfectly aware of the paradox, and foresees the amazement and the ridicule it will excite in Common Sense, which he says is nothing but Understanding organized into abstractions and the superstition of abstractions; whereas Philosophy deals with quite other conditions.* Common Sense, not aware that its logical forms are products of the mind, (by means of which the mind fashions sensations into objects,) detaches these forms from their source, regards them as not only objective but extra-mental. Being is thus held to be something wholly outside Thought, to which Thought has to conform; whereas Speculative Insight recognises Being as the other side of Thought—the work of Reason in objectifying sensation. Common Sense detaches the object from the thought, as two separate entities; whereas it is the business of Philosophy, according to Hegel, to show that all things and all thoughts are stages in one continuous evolution. Thus, pushing aside the objection of Common Sense, he passes on, scornful and self-reliant. In the words of his disciple Mr. Stirling: ‘There is in the brain of Hegel a dominant metaphor. This metaphor relates to a peculiar evolution which is characterised thus: It begins, of course, with a first; but this first is presently seen to imply its opposite, which opposite, developed in its turn, coalesces with the former to the production of a third, a new form, constituted by and containing, but only *impliciter*, the two former as moments. This third, this new form, developes *itself* now up to the full of *its* unity, and is presently seen to imply *its* opposite—with the same results. Now, we have to conceive this process repeated again and again till an end is reached;

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* ‘In dieser Wissenschaft ganz andere Bestimmungen vorkommen als im gewohnlichen Bewusstseyn und im sogenannten gemeinen Menschenverstande, der nicht der gesunde, sondern auch der zu Abstraktionen und zu dem Glauben oder vielmehr Aberglauben an Abstraktionen heraufgebildete Verstand ist.’—*Logik*, i. p. 76. (The edition I quote from is that of 1841.)

which end, we have further to conceive, passes back into the first, and thus the whole movement constitutes a simple circle. Each link in this circular chain, too, is seen to be a kind of triple unity. Ever, indeed, there seems somehow a flight of three, the last of which is always a return to the first, but changed, as if it were richer, heavier, more complete—more completely developed, in fact. Each of the three terms concerned must be conceived to begin, to fill, to reach its full; and when full, to show, as it were, the germ of its opposite, which rising up into its full, seeks union and coalescence with its former to a new production. This is the one metaphor of the thought of Hegel; and even here we can see that we have never moved from the spot; for this metaphor is but another way of expressing the one movement or principle already characterised in so many ways as *δύναμις, ὕλη, ἐντελέχεια*; Begriff, Urtheil, Schluss; Universality, Particularity, Singularity; Thesis, Antithesis, Synthesis; Being, Essence, Notion, &c. &c. Wherever we are, in Hegel indeed we have ever the same triplet before us in one or other of its innumerable forms. Always there are the two opposites or reciprocals which coalesce like acid and alkali to a base—a base in which they still implicitly are, but only as moments. This base, again, if the result of its moments, is really their base, their ground, their foundation, their *Grundlage*. If they found it, it founds them. It is the mother-liquor into which they have passed: it is a living base out of which they can arise and show themselves, and into which they can again disappearingly return. This is the Hegelian metaphor: a ground, a base, from which arise members, which again withdraw themselves—a differentiated *Common* or *One*. And what is this but the disjunctive or reciprocal whole of Kant, suggested to him by the disjunctive judgment, and discussed by him at so much length, and with such fresh, new, and creative vigour? A sphere of reciprocity: this is the whole. This is the Hegelian Idée-Monad. The reciprocity still must be understood as notional reciprocity—the triple reciprocity of universal, particular, and singular, each of which, as reciprocal of the others, holds the others in its own way, and is in fact the others. It is Identity gone into its differences indeed, but still even in these identical with itself. Differentiated identity, or identified difference, constitutes the one reciprocal sphere of Hegel—a sphere which is the whole universe—a sphere which is each and every atom in the universe—a sphere which, as self-consciousness, or rather as *the Notion* (self-consciousness in its simplest statement), is the one soul, the one spirit—which is life, vitality itself—and the only life, the only vitality. Thus it is—which is so curiously characteristic of the Hegelian philosophy—that every attempt to understand or explain any the least considerable of its terms becomes a flight into the system itself. So, for particular example, is it that the third is always the base and the truth of the first and second. We see this corroborated by fact; for it is simply the progress of thought to give itself the new as the reason or explanation or ground of the old, or of what preceded it.' And elsewhere he exclaims, 'Now this is the whole secret of Hegel, and this is his ultimate secret. These are the steps: *An sich, Für sich, An und für sich.*'

'The Ego is, firstly, the Universal; it is Identity, it is Immediacy, it is *An sich.* The Ego, secondly, *surveys itself*; that is, it *gives itself* or becomes to itself the *Part*icular, the Difference, the Dis-cernment, the Reflexion: it is *Für sich* (and *Anders-seyn* and *Seyn-für-Anderes* are evidently just identical with *Für sich*, the moment the Ego is the All). The Ego, thirdly, returns from survey of itself with *increase of knowledge*; that is, returning into itself (the universal) from or with the particular, it does not just reassume its old identity, but is now the Singular, which is Identity in Diversity, Immediacy in Reflexion, the Universal in the Particular, or it is *An und für sich.*'

We may, by way of anticipation, observe that Hegel's notion of God becoming conscious of Himself in Philosophy, and thereby attaining his highest development, is founded on the above process. God as pure Being can only pass into reality through a negation; in Philosophy he *negatives this negation*, and thus becomes a *positive* affirmation.

§ III. Absolute Idealism.

Everything contains within itself a contradiction, and this, as identity of the thesis and antithesis, constitutes its essence. Schelling's conception of the identity of Subject and Object was not exact. He assumed the reality of both of these *poles* of the magnet; and the identity he called the point of indifference between them. These two extremities were always separate, though identified. Hegel declared that the essence of all relation—that which is true and positive in every relation—is not the *two terms related*, but the *relation itself*. This is the basis of Absolute Idealism.

It may be thus illustrated: I see a tree. Certain psychologists tell me that there are three things implied in this one fact of vision, viz. a tree, an image of that tree, and a mind which apprehends that image. Fichte tells me that it is I alone who exist: the tree and the image of the tree are but one thing, and that is a modification of my mind. This is *Subjective Idealism*. Schelling tells me that both the tree and my Ego are existences equally real or ideal, but they are nothing less than manifestations of the Absolute. This is *Objective Idealism*. But, according to Hegel, all these explanations are false. The only thing really existing (in this one fact of vision) is the Idea—the *relation*. The Ego and the Tree are but two terms of the relation, and owe their reality to it. This is *Absolute Idealism*.

What does this Absolute Idealism bring us to? It brings us to a world of mere 'relations.' The Spinozistic notion of 'Substance' was too gross. To speak of Substance, was to speak only of *one* term of a relation. The Universe is but the Universe of Ideas, which are at once both objective and subjective, their essence consisting in the relation they bear to each other,—in the identity of their contradiction. 'Spinoza said God is Substance. I say that God is more than

Substance; he is the Notion (*Begriff*); a definition which, in my judgment, suffices to re-establish the Freewill of man.'

Remark also that this Absolute Idealism is Hume's Scepticism, in a dogmatical form. Hume denied the existence of Mind and Matter, and said there was nothing but Ideas. Hegel in effect denies the existence of both Object and Subject, since the only reality of either depends on its relation to the other. He blames Kant for having spoken of Things as if they were only appearances to us (*Erscheinungen für uns*), while their real nature (*Ansich*) was inaccessible. The real relation, he says, is this: that the Things we know are not only appearances to us, but are in themselves mere appearances (*sondern an sich blosse Erscheinungen*) having their ground not in themselves but in the Absolute. The real objectivity is this: that our Thoughts are not only Thoughts, but at the same time are the reality of Things.* For what we in ordinary language call Things are the acts of Thought, by which the subjective modifications of sensory organs are projected as objects. Being and knowing are one, or two aspects of one reality, two terms of one relation. Being is the simple relation of object and subject viewed from the objective aspect; knowing is the same relation viewed from the subjective aspect.

This is *the* Philosophy—not *a* Philosophy, remember—not a system which may take its place amongst other systems. No, it is the Philosophy *par excellence*.† True it is, that some of the young Hegelians, when reproached with the constant changes they introduce, reply that it belongs to the nature of Philosophy to change. But these are inconsiderate, rash young men. Mature and sober thinkers (of Hegel's school) declare that, although some improvements are possible in detail, yet on the whole Hegel has given *the* Philosophy to the world.

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* 'Dass die Gedanken nicht bloss unsere Gedanken, sondern zugleich das Ansich der Dinge und des Gegenständlichen überhaupt sind.'—*Encyklopädie*, § 41, p. 89; see also p. 97.

† *Gesch. der Philos.* iii. 690.

And this Philosophy is not simply a system of doctrines whereby man is to guide himself. It is something far greater. It is the contemplation of the self-development of the Absolute. Hegel congratulates mankind upon the fact of a new epoch having dawned. 'It appears,' says he, 'that the World-Spirit (*Weltgeist*) has at last succeeded in freeing himself from all encumbrances, and is able to *conceive himself as Absolute Intelligence* (*sich als absoluten Geist zu erfassen*). . . . For he is this only in as far as he knows himself to be the Absolute intelligence: *and this he knows only in Science; and this knowledge alone constitutes his true existence.*' * [illegible]

As for the system itself, we may leave to all readers to decide whether it be worthy of attention, except as an illustration of the devious errors of Speculation. A system which begins with assuming that Being and Non-Being are the same, because Being in the abstract must be conceived as the Unconditioned, and so must Non-Being, therefore both, as unconditioned, are the same; a system which proceeds upon the identity of contradictories as the method of Philosophy; a system in which the only real positive existence is that of simple Relation, the two terms of which are Mind and Matter; this system, were it wholly true, leaves all the questions for which Science is useful just as much in the dark as ever, and is therefore unworthy the attention of earnest men working for the benefit of mankind.

The futility may be estimated by a glance at the solutions of soluble problems which it offers. Nothing can exceed the ingenuity of nonsense exhibited by Hegel when he treats of questions which, as coming within the range of Verification, should, if his system were true, present the most convincing evidence of its truth. Newton (whom he calls a barbarian in thought †) and the empirical school (which he despises as 'trivial') he might ridicule to his heart's content, did he not exhibit the spectacle of his own hopeless failure to solve the problems approximately solved by Newton and the empirics.

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* *Gesch. der Philos*, iii. 689.

† *Ibid.* iii. 447.

A friend, to whose revision this chapter is much indebted, urges, in defence of Hegel, 'that it is not the business of Philosophy to discover particular empirical facts, but to investigate the general relation between the Cosmos and the thinking mind. Hegel's philosophy is a kind of Darwinian attempt to show *how* the objective world and the relation of the subject to it gradually grows up.' This defence would be final if the general relation were itself an algebraic expression of the particulars from which it was abstracted—in other words if the general included the particulars, and was not at variance with them. Unless natural selection were a fact, Darwin's hypothesis would have a merely speculative interest. It is because Hegel's dialectical process is at variance with some of the best established conclusions of science, that it is neglected.

Surely a system which has disclosed the highest truths, ought to have some illumination for the lower truths? A man who has sounded the depths of Being, ought to be able to state some of the simple laws of Phenomena? A man who can follow the development of the Cosmos, ought to have some insight into cosmical laws? But what is the fact in Hegel's case? He has not only failed to discover a single law, or to establish a single induction in the region of natural phenomena, but has vehemently opposed some of the best established inductions of previous thinkers. In Astronomy, Physics, Chemistry, Biology, Psychology—though all these subjects have been treated by him—his system is utterly useless.

Not only is it useless; it is worse, it is pernicious. The facility with which men can throw all questions into systematic obscurity by the aid of Metaphysics, has long been the bane of Germany. In England and France we have been saved from perpetuating the frivolous discussions of the Schoolmen mainly because we have retained their nomenclature and terminology, and are warned by these from off scholastic ground; but the Germans, having invented a new philosophical language, do not perceive that the new terms disguise old errors: they fail to recognise in *Irrlicht* the familiar face of *Ignis fatuus.*

Even a disciple admits that, with respect to the explanation of Nature, 'it is dangerous to read here if one would preserve one's respect for Hegel. . . . all the essential greatness of the man has disappeared for the time, as it were, behind a dwarf.' 'Indeed, the instrument he has in hand brings with it its own temptations to merely arbitrary products, and the bare show of a consistent and continuous rationale.' Again: 'Strange how such a tough, shrewd, worldly man should have so egregiously deceived himself! Because he could new-classify and new-name, he actually thinks that he new-knows and new-understands! . . . In regard to Hegel, satisfaction and dissatisfaction are seldom far from each other, but the latter predominates. If for a moment the words light up, and a view be granted, as it were, into the inner mysteries, they presently quench themselves again in the appearance of mere arbitrary classification and artificial nomenclature.' * A truer criticism was never written. Beside it may be placed these sarcasms Hegel directed against Schelling, sarcasms quite as applicable to his own formalism: 'The dodge (*der Pfiff*) of such wisdom is quickly acquired and is easy to put in practice; once known, its repetition is as intolerable as the repetition of an exposed jugglery. It is as if a painter had but two colours, red and green, with the former to depict historical subjects, with the latter landscapes. This method of labelling everything in the heavens above and on the earth beneath with names from the general schema, and so arranging the Cosmos, resembles the ticketing of skeletons, or closed cases in an old curiosity shop.' † Or, as Mr. Stirling in one of his wild outbursts exclaims: '*The fact is, it is all maundering, but with the most audacious usurpation of authoritative speech on the mysteries that must ever remain mysteries.*'

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* STIRLING: *Secret of Hegel*, ii. pp. 523, 522, 66. Mr. STIRLING's admiration for Hegel's philosophy by no means blinds him to many of Hegel's defects.

† HEGEL: *Phänomenologie des Geistes.* Vorrede, p. 40.

When Hegel is dealing with History or with Nature, the worthlessness of his Method, and palpable failure of its application, are manifest. No better illustration can be named than his treatment of Newton, whose device, 'Physics beware of Metaphysics,' he says may be translated, 'Science beware of Thought;' which 'precept the followers of Newton have faithfully followed.'* Was there ever a more audacious misrepresentation? Newton and his followers dispensing with Thought, because they tried to keep within the limits of verification! Hegel further adds that, so far from Newton's optical theory being 'a model of observation and reasoning, it is a model of what observation and reasoning should *not* be.' Let a sample or two of Hegel's own industry be placed beside that of Newton, and the reader may draw his own conclusion.

I. The position of our planet in the Cosmos renders it peculiarly fitted to be the cradle of Mind; but in order that this should be, the planet had to give up its pristine form, and suffer many cataclysms. In these catastrophes it was the unborn spirit of Humanity which unconsciously worked in the bowels of the Earth, preparing its future domain.

This is assuredly not Newtonian; but it has a curious and instructive affinity with a speculation of Auguste Comte's, when that great thinker had lapsed into the Subjective Method, from which his earlier speculations were so happily free. In his latest work we read: 'Il est permis de supposer que notre planète, et les autres astres habitables, furent doués d'intelligence avant que le développement social y devint possible. Alors la terre vouait ses forces à préparer le séjour de l'Humanité.' †

II. Physicists have speculated much about Heat; this is Hegel's explanation: 'Heat is the restoration of heavy

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* HEGEL: *Geschichte der Phil.* iii. 447.

† AUGUSTE COMTE: *Synthèse subjective*, 1856, p. 10. In a very interesting and erudite work, *Time and Space*, by Mr. SHADWORTH HODGSON, 1865, p. 400, there is a notice of several coincidences in the speculations of Hegel and Comte, which, however, are mainly formal; the real resemblance lies in their subjective procedure.

Matter to its formlessness, its fluidity; the triumph of homogeneous Matter over the specific determination of its out-of-itselfness; its abstract Continuity as Negation of Negation (the Form) determined; *i.e.* thrown into activity.'

III. In the development of Humanity we are told by Hegel that the races are moments. The Negro race is the Natural Mind in itself (*der natürliche Geist als solcher*); the Mongolian shows the Mind conscious of its opposition to this natural form, and tending to rise above it; the Caucasian is the Free Mind: Mind returned to the absolute unity in itself.

IV. Passing over many drolleries of deduction respecting organic phenomena, we may pause at the explanation of the infant's first cry: 'While animals are born dumb, or only express their pain through moans, the child expresses the feeling of his wants through *cries*. Through this ideal activity the child from the first manifests himself as penetrated by the conviction that he has a right to demand from the outward world the satisfaction of his wants—that the independence of the outward world is a nullity in regard to Humanity.' *

V. One more sample is all that I can find space for; it shall be drawn from Art. Music has for its material, tone. What is tone? The inner trembling of a sonorous body; *consequently*, the world of Sense is forsaken by Music, and the world of inner Emotion is exclusively acted on by it. This is why Music is the most subjective of all the Arts.

Is it needful to ask the reader whether Newton and the followers of Newton were justified in neglecting Thought which had such products as these? But Mr. Stirling, who is not blind to the absurdities in Hegel's explanation of the external world—who has, indeed, truly said: 'Hegel is always pedagogue-like; with him naming is explaining'—nevertheless remains a devout disciple, and after admitting the failure of the Philosophy of Nature, says, 'that one glance at the Science of Logic or the Philosophy of Spirit restores thé balance, and forces a recognition of Hegel as the absolute master of Thought.' We must not therefore leave these efforts unnoticed.

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* HEGEL: *Encyklopädie*, § 396, p. 93. The previous examples are culled from the same work. There is much more *ejusdem farinæ*.

§ IV. HEGEL'S LOGIC.

Philosophy being the contemplation of the self-development of the Absolute, or, as Hegel sometimes calls it, the representation of the Idea (*Darstellung der Idee*), it first must be settled in what directions this development takes place.

The process is this. Everything must be first considered *per se* (*an sich*); next in its negation, as some *other* thing (*Anders-seyn*). These are the two terms—the contradictories; but they must be identified in some third, or they cannot exist; this third is the Relation of the two (the *Anundfürsichseyn*). This is the affirmation which is founded on the negation of a negation: it is therefore positive, real.

The Absolute, which is both Thought and Being, must be considered in this triple order, and Philosophy falls into three parts:—

I. LOGIC, the science of the *Idee* * *an und für sich.*

II. NATURE-PHILOSOPHY, as the science of the *Idee* in its *Andersseyn* or externality.

III. PHILOSOPHY OF INTELLIGENCE, as the *Idee* which has returned from its otherness to itself.

Logic, in this system, has a very different meaning from that usually given to the word. It is, indeed, equally with the common logic, an examination of the forms of Thought; but it is more:—it is an examination of Things no less than of Thoughts. Its object may thus be formulated: 'The exposition of God in his eternal essence previous to the creation of Nature and a finite Mind.' † It is 'the diamond net in which the Universe is woven.' As Object and Subject are declared identical, and whatever is true of the Thought is equally true of the Thing, since the Thought *is* the thing, Logic, while taking the place of the ancient Logic, is at the same time Metaphysics. It exhibits the genesis of all abstract ideas. Consequently it contains the whole system of Science, whose parts are but the application of this Logic.

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* The *Idee* is but another term for the Absolute, 'the adequate Notion, the objectively True, or the True as such.' (*Logik*, iii. 236.) We shall use it, rather than Idea, because the English word cannot be employed without creating unnecessary confusion.

† *Logik*, i. 33.

Hegel's *Logic* is contained in three volumes of dry abstractions. It is a representation of the *Idee*, in its process of pure thought, free from all contact with objects. It is wholly abstract. It begins with pure Being. This pure Being, in virtue of its purity, is *unconditioned*; but that which has no conditions has no existence: it is a pure abstraction. Now a pure abstraction is also the *Nothing* (*das Nichts*) : *it* also has no conditions; its unconditionalness makes its nothingness. The first proposition in Logic is, therefore, 'Being and Non-Being are the same.'

Hegel admits the proposition to be somewhat paradoxical; but he is not a man to be scared by a paradox, to be shaken by a sarcasm. He is aware that stupid Common-Sense will ask, 'whether it is the same if my house, my property, the air I breathe, this town, sun, the law, mind, or God, exist or not.' Certainly, a very pertinent question : how does he answer it? 'In such examples,' he says, 'particular ends—utility, for instance—are understood, and then it is asked if it is indifferent to me whether these useful things exist or not? But, in truth, Philosophy is precisely the doctrine which is to free man from innumerable finite aims and ends, and to make him so indifferent to them that it is really all the same whether such things exist or not.' Not only does Philosophy thus waive aside the objection as irrelevant, it also points out that the objection is illogical, since it applies to concrete and determinate Being the proposition which is enounced respecting abstract and indeterminate Being. He thus meets the objection in a passage which Mr. Stirling translates as follows:—

'It were vain to seek to meet on all sides the perplexities into which ordinary consciousness, in the case of such a logical proposition, misleads itself, for they are inexhaustible. It is possible only to notice a few of them. One source of such perplexity, among others, is that consciousness brings with it to the consideration of such abstract logical position, conceptions (representations) of a concrete *Something*, and forgets that there is no question of any such here, but only of the pure abstractions of Being and Nothing, and that it is these alone which are to be held fast.

'Being and Non-being are the same thing; it is, *therefore*, the same thing whether I am or am not, whether this house is or is not, whether these hundred dollars are or are not in my possession. Such inference or such application of the proposition alters its sense completely. The Proposition contains the pure abstractions of Being and Nothing; the application, on the other hand, makes of these a determinate Being and determinate Nothing. But, as has been said, the question here is not of determinate Being. A determinate, a finite Being, is such as refers itself to others; it is a complex which stands in the relation of necessity with many other such, with the whole world. As regards the reciprocating system of the whole, Metaphysic might advance the—at bottom tautological—allegation, that were a single dust-atom destroyed, the whole universe would collapse. In the instances opposed to the position in question, something appears as not indifferent, whether it is or is not, not for the sake of Being or Non-being, but for the sake of its Import, which Import connects it with other such. If a determinate complex, any determinate There-being, be presupposed, this There-being, because it is determinate, is in manifold relation to other complexes; it is not indifferent to it, then, whether a certain other complex with which it stands in relation, is or is not; for only through such relation is it essentially that which it is. The same thing is the case with conception (Non-being being taken in the more determinate sense of conception as against actuality), in the context of which the Being or Non-being of an Import, which is conceived as determinately in relation with something other, is not indifferent.'

To Hegel's own explanation let us now add Mr. Stirling's: —

'Pure Being and Pure Nothing are absolutely identical—they are absolutely indistinguishable. It is useless to say Nothing is Nothing, but Being is Something: Being is not more Something than Nothing is. We admit Nothing to exist; Nothing is an intelligible distinction; we talk of thinking Nothing and of perceiving Nothing: in other words, Nothing is the abstraction from every discrimen or particularity. But an abstraction from every discrimen, does not involve the destruction of every or any discrimen: all discrimina still exist; in Nothing we have simply withdrawn into indefiniteness. This Nothing, then, of ours still implies the formed or definite world. Precisely this is the value of Pure Being: when we have realised the notion Pure Being, we have simply retired into the abstraction from all discrimina, but these—for all our abstraction and retirement—still are. Pure Being and Pure Nothing, then, point each to the absolutely same abstraction, the absolutely same retirement. In both, in fact, Thought, for the nonce, has turned its back on all its own discrimina; for Thought is all that is, and all discrimina are but its own. In fact, both Being and Nothing are abstractions, void abstractions, and the voidest of all abstractions, for they are just the ultimate abstractions. Neither is a concrete; neither is, if we may say so, a *reale*. *What*, then, *is*—What *actu* is—in point of fact is—is neither the one nor the other; but everything that is, is a *σύνολον*, a composite, of both. This is remarkable—that the formed world should hang between the hooks of two invisible abstractions, and, at the same time, that every item of the formed world should be but a *σύνολον* of these two invisible abstractions. We cannot handle Being here and Nothing there, as we might this stone or that wood; yet both stone and wood are composites of Being and Nothing: they both *are* and are *not*—and this in more senses than one. They *are* —that is, they participate in Being. They are distinguishable, they involve difference; difference implies negation: that is, they participate in Non-being. The stone is *not* the wood, the wood is *not* the stone: each, therefore, if it *is*, also is *not*.'

Need we insist on the violation of the dialectical Method which is implied in these arguments? If the process of negation is true of the abstract indeterminate, it must be equally true of the concrete determinate. If Pure Being is the same as Pure Nothing, then is particular Being the same as particular Nothing, unless there is a breach of continuity in the passage from abstract to concrete.*

I may remark, however, that many minds startled by the paradox of Being and Non-Being, and especially puzzled to conceive the existence of Non-Being, nevertheless cherish an analogous conception. They are astonished at Hegel's saying, 'Non-Being *exists*, for it is a Thought.' Yet they are quite comfortable in the assurance of an existing Space which is assuredly only a Thought, and one having all the characters (or characterlessness) of Non-Being. Besides Matter, they presuppose an empty Space, *in* which Matter exists and moves. It is true they do not conceive this Space to be the *same* as Matter; yet, if they hold fast to the logical position, that to know what a thing is we must also know what it is not, *omnis determinatio est negatio*, the Hegelian deduction ought not to surprise them. Again: the popular conception of Inertia as a property of Matter, is the personification of a negation; Inertia being the incapacity of a body's changing its state, this simple negative becomes transformed into a positive; and men speak of 'quantity of Inertia,' 'force of Inertia,' 'overcoming Inertia,' and so on. More examples might be adduced; but these will suffice to show that if Hegel is paradoxical in regarding Negation as one of the moments of the Infinite Process, analogous absurdities are current in the popular Metaphysics.

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* The friend before referred to urges: 'The abstract relation Being = Nothing ceases to be true when we get even as far as the category of Something; for Something does not = Nothing, but Another thing, i.e. a more concrete negation. A something is determinate by being of a particular kind, by being what it is as distinguished from every other something; but it is only so determinate as the expression of every other something, to the whole universe of somethings to which it is related, and its relation to which makes it to be of a peculiar character.'

To return, however. The first proposition has given us the two contradictories; there must be an identity—a relation—to give them positive reality. As pure Being, and as pure Non-Being, they are sheer abstractions which have no reality; they are mere potentialities. Unite them, and you have the *Becoming* (*Werden*), and that is reality. Analyse this idea of Becoming, and you will find that it contains precisely these two elements,—a Non-Being from which it is evolving, and a Being which is evolved.

Now these two elements, which reciprocally contradict each other, which incessantly tend to absorb each other, are only maintained in their reality by means of the relation in which they are to each other;—that is the point of the magnet which keeps the poles asunder, and by keeping them asunder prevents their annihilating each other. The Becoming is the first concrete Thought we can have, the first conception: Being and Non-Being are pure abstractions. As abstractions, they are distinguishable in Thought, although not separable in reality. They are so related as to be at once the same and different. The difference is negation. Being is the *Ansichseyn* or Selfness; it must pass into its opposite, *Andersseyn* or Otherness (Asunderness), and in the passage it becomes Reality, *An und für sich seyn*, or In-and-for-its-selfness.

This return of Itself into Itself through its Otherself, is one of the logical sleights most difficult to follow. Two cardinal objections may be made to it: First, that it is absolutely unthinkable, cannot be construed to the understanding, however it may be phrased. Secondly, the passage from Abstraction to Reality is only intelligible by the aid of such conceptions as Time, Space, Movement, &c.

I. It is absolutely unthinkable. Try to follow in thought the movement of a point *out of itself* into another, and back again into itself enriched by that other. That A may pass into B, there to be united with B, resolved into it, and form another unity, C, is conceivable; the acid combines with its opposite, or base, and forms a salt, which is the synthesis of two opposites. But this is seen to be possible because the opposites are real; were the base an acid, or the acid an alkali, no such synthesis would be possible, the union would give no salt, but simply an addition. In the Hegelian process no synthesis is possible, because no real opposition is presupposed. The abstraction, Being, is the same as Non-Being. These are two moments, the two termini of an oscillating pendulum, the convex and concave surfaces of one curve. But the one moment, the one terminus, the one surface, cannot pass out of itself into the other. The 'out-of-itselfness' is a metaphor destitute of conceivable import. When negatived, Being is not out of itself, still less is it another; for it *is* not at all. But, even if we overlook this insuperable obstacle, we cannot render conceivable the assumed result of the process; we cannot conceive any enrichment of Being when it returns into itself—unless in the course of the passage it has incorporated some foreign positive elements. 'Existences are the concretions of the Abstract.' With all my heart! Only do not pretend that in the simple process of concretion—a formal change—there has been any material addition. The dirty water which you have condensed from your fog, existed already as dirty vapour of water. 'The Beginning,' says Hegel, 'is not the pure Nothing, but a Nothing from which Something is to be evolved: Being is thus from the first included in the Beginning. The Beginning thus includes both Being and Nothing; it is the unity of the two—or is Non-Being which is at the same time Being, and Being which is at the same time Non-Being.'*

The passage of a thing out of itself into another, without loss of self, is simply inconceivable. Hegelian logic reconciles the contradiction by adopting it. The 'other' is with him the 'same.' Something (*Etwas*) and Another (*ein*

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* *Logik*, i. p. 63.

Anderes) are both, he says,* in the first place Something existing (*Daseyende oder Etwas*): secondly, Each is equally Another. If we call one existence A, and the other B, then B is in the first place determined as the Other. But A is equally the Other of B. Both are in the same way Others. To fix the difference, and the affirmative Something, there is the word *This*. But *this* simply says that the distinction and drawing out of a Something is subjective, and is outside the Something itself. *This* includes no difference; all and every Something are just as well *this*.'

When a man manipulates language in this way he can reconcile any incongruity; but neither by this, nor by any other means, can we construe in thought the movement of A into not-A, and its return again as A completed and enriched —still less the movement of one empty Abstraction towards another empty Abstraction, and the consequent evolution of a full concrete. In his exposition of the Becoming, he declares 'the Becoming of Essence, its reflected Movement, is the Movement of Nothing to Nothing, and, therethrough, back again to itself. The passage, or Becoming, suppresses itself in its passage; the Other, which becomes in this passage, is not the Non-Being of a Being, but the Nothing of a Nothing; and this negation of a Nothing constitutes Being.'† If it be said that the concrete Existence is implied in the abstract Being and Non-Being—that we must by the laws of thought so conceive this—the answer is that in such a case Existence is not evolved from the two, but is presupposed in them. Now it is Hegel's pretension to have evolved Existence from the Law of Contradiction; whereas the Contradiction of A-not-A does not give C; the oscillation of Being and Non-Being remains an alternation of Being and Non-Being, it does not give Existence.

So far from the necessary laws of Thought forcing us to Hegel's conclusion, his conclusion directly violates those laws. His Nothing is an unthinkable beginning. It is so on his own principles: for he says that Thought is Specification, and if Nothing is to be thought, it must be specified (*bestimmt*), and thus be Something. As Feuerbach epigrammatically puts it: *Wer Nichts denkt, denkt eben nicht.** If Logic has any voice in the matter, it proclaims that Hegel's *Nichts* is unthinkable, since he presents it as a Nothing out of which Something is to issue. The same Logic protests against his *Seyn*, or unconditioned Being, as a beginning; for if it is, as he says, a pure abstract in which there is nothing to be intuited, nothing to be thought, how can we make this *unanschaubaren* and *undenkbaren* abstract a conceivable *prius*? If Being is unconditioned, and Non-Being is unconditioned, whence the conditions? If the beginning is a couple of contradictory abstracts, where is the origin of their concretes?

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* *Logik*, i. p. 115.

† *Ibid.* ii. p. 15.

II. This leads me to the second cardinal objection, namely, that Hegel presupposes the very elements he pretends to evolve; and while declaring that he starts from pure abstracts which in the dialectical process will become concretes, he does in fact quietly introduce the elements of Experience, and invokes the Categories. Thus, unless to the pure Being and pure Nothing we add other elements, the dialectical process itself is unthinkable. A will remain immovably A, and B will remain B. One addition Hegel implies, namely, that of Development, *Werden*. The contradictory couple is resumed in the unity of realization. Let us grant him this third factor. No sooner is it granted than we discover that in it Movement must be presupposed, and Movement presupposes Space and Time. These cannot be set aside as subjective merely; they are not so regarded by Hegel, for in his system they and all other subjective categories are objective likewise, and he regards Space and Time as Forms of Being. Trendelenburg † has pointed out the necessity of

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* Feuerbach: *Kritik der Hegel'schen Philosophie*; in his *Philos. Kritiken und Grundsätze*. Werke, ii. 224.

† Trendelenburg: *Logische Untersuchungen*, 1862, i. 38. 'Das reine Seyn, sich selbst gleich, ist Ruhe; das Nichts—das sich selbst Gleiche—ist ebenfalls Ruhe.

Movement, and Hegel's entire neglect of any attempt to deduce it. One may remark, indeed, the significant disregard of this all-important category throughout the exposition. Perhaps Hegel considered that it was involved in the dialectical process. But this process itself is an assumption not otherwise warranted. The only passage I can recall in which there is a pretence of a deduction, is that in which he makes Movement the product of Negation. Speaking of the old atomic conception that the Void is the source (*Quelle*) of Motion, he remarks that 'this has not the unimportant meaning that a thing can only move in a Void, and not in space already occupied; in this sense the Void would only be the assumption or condition of Motion, not its *ground* or reason. The view that the Void is the ground of Motion includes the deeper thought that in Negation generally lies the ground of Becoming, the unrest of Self-movement. The Void is the ground of Motion only as the negative relation of the One to its negative, that is to say, of the One to itself, which is nevertheless affirmed as There-Being (*als Daseyendes gesetzt ist*).'* Elsewhere, when treating directly of Motion, he defines it as 'the affirmation of the identity of Space and Time in Place.'† But in no passage that I remember has he escaped the charge of having throughout presupposed Movement as equally indispensable with Being and Non-Being in the production of Existence. So that instead of the two contradictories, the two moments, three are necessary, the third bringing with it two others, Space and Time, thus making five *principia* in lieu of one *principium.*

Hegel admits that the transition from Ideality to Reality, from the Abstract to Concrete Existence, from Space and Time to their appearance as Matter, is inconceivable to the understanding, *für den Verstand unbegreiflich.*‡ But it may be said to be equally inconceivable to the speculative Reason

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Wie kommt aus der Einheit zweier ruhenden Vorstellungen das bewegte Werden heraus?' Comp. also SHADWORTH HODGSON: *Space and Time*, p. 374. SCHELLING was the first to make this objection.

* *Logik*, i. 178. † *Encyklopädie*, § 261. ‡ *Loc. cit.*

upon any principles admitted by him; it is simply asserted, not deduced.*

Nor does the objection end here. 'Development,' he says, 'is not only the unity of Being and Nothing, but is *unrest* in itself.' The unrest will only be a movement of Being to Being—a formal change—it cannot be a movement from One to Another, unless an *otherness* be presupposed, and difference already exist; still less is it conceivable as a movement from Being to Nothing. Hegel might say that the *otherness* was indissolubly involved in the ground of contradiction, Development having for its *moments* Birth and Death. Yet according to any conceivable process Birth is a metamorphosis of Being, a new form; and Death is the resolution of that into other forms; in each case the passage is from Being to Being, not from Nothing to Being and from Being to Nothing.

Let us, however, no longer pause in the exposition; we shall have to criticise the system when its outlines are before us. Enough has been said respecting the basis, we may now glance at the superstructure.

In the dialectical process *Quality* is the first negation: it is the reality of a thing. That which constitutes Quality is the negation which is the condition of its Being. Blue, for example, is blue only because it is the negation of red, green purple, &c.; a meadow is a meadow only because it is not a vineyard, a park, a ploughed field, &c.

Being, having suffered a Negation, is determined as Quality —it is Something, and no longer an Abstraction. But this something is limited by its very condition; and this limit, this negation, is external to it: hence Something implies Some-other-thing. There is a *This* and a *That*. Now the Something and the Some-other-thing, the *This* and the *That*, are the *same* thing. *This* is a tree; *That* is a house. If I go to the house, it will then be the *This*, and the tree will be *That*. Let the tree be the Something, and the house the Some-other-thing, and the same change of terms may take place. This proves that the two are identical. The Something carries its opposite (other-thing) within itself; it is constantly becoming the other-thing. Clearly showing that the only positive reality is the *Relation* which always subsists throughout the changes of the terms.

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* My friend objects that my argument 'involves the identification of Becoming with physical development [as indeed it does], which of course takes time and requires space. So you may say does thinking. It does in one sense. It takes some people ten years or a lifetime to pass from the premisses to the conclusion; but the premisses lead to the conclusion immediately *as a mere relation between ideas*, and the process no more requires time or space than it requires time or space for twice two to make four. [Surely time is required to think even this relation, and there is movement of thought from one term to the other?] If this is so, and it be admitted that Hegel is dealing with ideas and relations between them [but he means these relations to be physical no less than mental] and only of "movement" in this sense, your objection that he begins with five principia falls to the ground.'

He tells us that perception gives us the ideas of Now, Here, This, &c. And what is the Now? At noon I say, '*Now* it is day.' Twelve hours afterwards I say, '*Now* it is night.' My first affirmation is therefore false as to the second, my second false as to the first: which proves that the *Now* is a general idea; and as such a real existence independent of all particular *Nows*.*

The reader who envies the brain-whirl of a spinning Dervish may seek this enjoyment in the work now under notice. Such a succession of logical puzzles and juggling solutions has never been presented since the days of Aquinas. It is true that every now and then we meet with a suggestive remark, a penetrating analysis, a drastic refutation of some absurdity current in the schools. But these irradiations of the nebula only make its unsubstantial quality more apparent. In the discussion of Phenomena and the *Ding-an-sich*, there is masterly superiority. It would, however, call for more space than is at my disposal, to exhibit it intelligibly. Let us merely note the declaration that the 'Thing in itself is the empty abstraction from all conditions, and just because it is thus removed from all conditions it is removed from all knowledge.' But instead of remaining within the *critical* circle, and declaring knowledge of Things impossible, Hegel argues that the true *an*

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* *Phänomenologie des Geistes*, p. 86.

sich of Things is their Essence and this is precisely that which is knowable, the phenomenon being not the unsubstantial phantom of an unknowable but the actual manifestation, the reality of the essence.*

Recommending the greater part of this second Book to metaphysical students, I pass on to glance at the third, which sets forth the nature of the Notion, Concept (*Begriff*).

The Notion (*Begriff*) is the *truth*, or union, of Being (*Seyn*) and Essence (*Wesen*), which are expounded in the two first books. Its evolution is the construction of the universe, namely, the world of Truth and Reason, that which really is. And here may profitably be placed the view which Hegel entertains of Truth. In the *Encyklopädie* he rejects the common confusion of Truth with Accuracy, declaring that men commonly speak of a judgment as true, when it is only correct. A correct judgment expresses only the formal agreement of our ideas with their content, let that content be what it may. 'On the other hand Truth consists in the agreement of the object with itself, that is to say, with its Notion. It may be *correct* to say that some one is ill, or has stolen something; but such a meaning (*Inhalt*) is not *true*, because a diseased body is not in accordance with the Notion of Life, nor is theft an action which accords with the Notion of human activity.' † In contrast to the old Logic, which regarded Truth as the agreement of notions with objects, the modern Logic, he says, starts from the position that only that which Thought presents respecting Things is the truly True.* And with an etymological reference, familiar to him, he remarks that *thing* and *think* are closely allied.

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* 'Dem Dinge ohne seine Eigenschaften bleibt deswegen nichts als das abstrakte An-sich-seyn, ein unwesentlicher Umfang und äusserliches Zusammenfassen. Das wahrhafte Ansichseyn ist das Ansichseyn in seinem Gesetztseyn; dieses ist die Eigenschaft. Damit ist die Dingheit in die Eigenschaft übergegangen.' *Logik*, ii. 133. To understand the real thought of Hegel here the student should meditate the section on Definition (*Logik*, iii. 280 *sq.*). If the exposition is not clear to him, he may with profit read TAINE: *De l'Intelligence*, 1870, vol. ii. livre iii.

† *Encyklopädie*, § 172, p. 334. Compare also *Logik*: *Einleitung*, p. 26. It is repeated by his disciple ERDMANN: *Psychologische Briefe*, 3tte Aufl. 1863, p. 63. This strange conception of truth is not original with HEGEL; it had been announced by BARDILI. His maxim 'whatever contains no contradiction within itself must exist,' seemed to be opposed by the fact that immoral actions, which were contradictions of morality, did exist; in answer to this objection, he declared that 'such actions only contradict what the immoral man *wills to be*, imagines he can be, not what he *is*: the *true* man cannot be immoral.' BARDILI und REINHOLD, *op. cit.* p. 65.

This position becomes intelligible, and explains his famous paradox, 'whatever is real is rational, and whatever is rational is real,' when we learn that he adopted the realistic view of Universals—Platonic Ideas †—and he is consistent in maintaining that 'a thing has only reality in its Notion; in as far as it is different from its Notion it ceases to be real, and is a nothingness; this nothingness is its palpable and sensuously external side—*die Seite der Handgreiflichkeit, und des sinnlichen Aussersichseyns gehört dieser nichtigen Seite an.*'‡ Things, the transitory and perishable individuals, are not real, or only real in as far as they are universals. The oak is real as *tree*, namely, that which is universal in oaks, beeches, limes, oleanders, &c., in other words its notion. Only by means of its universality can a thing enter mind which is universal.§ When we say that we have the notion of a thing, what is meant? That its qualities or properties ‖ have entered our minds through the senses. But although we intend to designate it as a 'thing,' we unconsciously declare that we have received from it a general 'notion;' and our notion of it constitutes its essence. For although in the act of perception our senses are directed to it individually, we are unable to seize it except through *general* notions. In saying 'this house,' I may intend to designate an individual thing, but I cannot at the same time help designating the general notion 'house,' while 'this' again is another general notion.¶

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* 'Jene legte nämlich zu Grunde, dass das, was durchs Denken von und an den Dingen erkannt werde, das allein an ihnen wahrhaft Wahre sey; somit nicht sie in ihrer Unmittelbarkeit, sondern sie erst in die Form des Denkens erhoben, als Gedachte.' *Logik*, i. 27.

† *Logik*, i. 12. ‡ *Ibid.* i. 34.

§ 'Das Begreifen eines Gegenstandes besteht in der That in nichts Anderem, als dass Ich denselben sich zu *eigen* macht, ihn durchdringt, und ihn in *seine eigene Form*, d.i. in die Allgemeinheit welche unmittelbar *Bestimmtheit*, oder Bestimmtheit, welche unmittelbar Allgemeinheit ist, bringt.' *Logik*, iii. 15.

‖ On properties, comp. *Logik*, i. 113, and ii. 124.

¶ 'Die empirische Welt denken heisst vielmehr wesentlich ihre empirische Form

Notions are either general or particular, and as such exist in every individual thing. They are neither *abstract* nor *distinct* from the things in which they exist. The notion is primarily general, but its dialectic impulse forcing it to set limits to itself, it becomes particular by the negation of itself; and this particularisation, which is indeed only the negation of the general, comes into existence in each individual.*

Now let us trace the genesis of the Notion, or rather its affirmation as the Truth of Being and Non-Being. The *beginning*, ἀρχὴ, gave us Being in general (the Notion in general), cleared from every particularity, away from every determination. But this Notion, by its own dialectic impulse, was forced to deny itself, and pass over (*übergehen*) to its opposite, Non-Being, equally free from every form or particularity. Returning to itself thus enriched, it affirmed itself as Essence (*Wesen*) on the one side, and as Truth on the other.

In the *Philosophy of History* we read that speculative cognition has *proved* Reason to be Substance as well as Infinite Power, 'its own *Infinite Material* underlying all the natural and spiritual life which it originates, as also the *Infinite Form*,—that which sets this Material in motion. On the one hand, Reason is the *substance* of the Universe; viz. that by which and in which all reality has its being and subsistence. On the other hand, it is the *Infinite Energy* of the Universe; since Reason is not so powerless as to be incapable of producing anything but a mere ideal, a mere intention—having its place outside reality, nobody knows where; something separate and abstract, in the heads of certain human beings. It is *the infinite complex of things*, their entire Essence and Truth. It is its own material which

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umändern und sie in ein Allgemeines verwandeln; das Denken übt zugleich eine *negative* Thätigkeit auf jene Grundlage aus; der wahrgenommene Stoff, wenn er durch Allgemeinheit bestimmt wird, *bleibt nicht* in seiner ersten empirischen Gestalt. Es wird der innere *Gehalt* des Wahrgenommenen mit Entfernung und *Negation* der Schale herausgehoben.' *Encyklopädie*, § 50, p. 108.

* Comp. *Phänomenologie*, the early sections, and *Logik*, iii. *Vom Begriff im Allgemeinen.*

it commits to its own Active Energy to work up; not needing, as finite action does, the conditions of an external material of given means from which it may obtain its support, and the objects of its activity. It supplies its own nourishment, and is the object of its own operations.'

The movements of the planets take place according to unchangeable laws. 'These laws are *Reason implicit in the phenomena in question.* But neither the sun nor the planets which revolve around it can be said to have any consciousness of them.'

Elsewhere we read:—

'The simple Infinity or the absolute Notion is the simple essence of Life, the soul of the world, the universal blood, which, everywhere present, is rendered turbid and discontinuous by no difference, rather is itself all differences and their suppression, thus pulsating in itself without moving itself, trembles in itself without unrest. It is the self-equal, for the differences are tautologous, they are differences which are none. This self-equal essence has therefore only relation to itself. *To itself*: this implies another to which the relation refers, and the *relation to itself* is rather the separation in two (*das Entzweien*), or in other words, that self-equality is an inner difference.'* He thus stumbles upon the question which he says has vexed Philosophy: How can *difference* come from pure essence? He answers it in the same way as he answers the question, How can the Infinite become Finite? Namely, by restating the question —by declaring that the Infinite is at the same time the Finite.† The difference is included in the self-equality. 'The Unity, from which we are told that Difference cannot issue, is in fact only the one moment of the Duplicity (*Entzweiung*); it is the abstraction of Simplicity which is opposed to Difference. But inasmuch as it is an abstraction, only one of opposites, it is the Duplicity.'

This looks like logical legerdemain, but it has its ground in the very principle of his system, the identity of Object and

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* *Phänomenologie*, p. 126.

† *Logik*, i. 161.

Subject, which we shall have hereafter to notice more fully. Here is a passage which throws strong light on what has just been read: 'I distinguish myself from myself, and it is therein immediate for me, that this distinguished is not distinguished.' *

Let us continue our exposition without involving ourselves in debates that would be interminable. What has already been stated may be summed up in the assertion that Development is the process of the universe, Dialectics the subjective aspect of the process. The Notion which developes itself externally into Nature, developes itself through Self-consciousness into God. Or, to phrase it with Schelling: 'Nature is only the visible organism of our understanding.'

How does this take place? Mr. Stirling shall answer:—

'Self-consciousness is the universal, the all-common (as in German), or the Common whole that is: *but it thinks itself*; and *itself thought* is to itself *its object*, its negative, its particular, which so is just the particular of the universal. But so long as itself is to itself in the form of object, or other, which it considers, it has not completed the act of thought: that act is completed when it returns, as knowledge, to itself as singular, that is, from the particular back into the universal. This is the single secret of Hegel; and his obscurest writing is but an abstract, and so almost mystifying description of all this.'

And in further elucidation of this identity of self-consciousness and the universe, read this passage:—

'Hegel coolly accepts the new position—demands no proof, supplies no proof—only sets to work new-arranging and new-labelling. All is ideal, and all is substance, but all must have the schema of subject. Nature is but the *other* of Spirit, and the Logical Idea unites them both. This is parallel to the scheme of Spinoza, Extension, Thought, and Substance. The general schema is to be considered applicable also as particular, or as method. All are ideas; they must be classified, then—thrown into spheres, objective, subjective, and so on. The logical are the common categories—the secret machinery of the whole—the latent, internal, invisible skeleton.

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* *Phänomenologie*, p. 129.

'Say a pool of water reflects the world above. Now, let there be no above, but let the pool still reflect as before. The pool, then, becomes in itself reflector and reflexion, subject and object—Man. Restore now again the *above* which we withdrew, the above that was reflected in the pool—the mighty blue gulf of the universe; and call that the reflexion of a mightier—to us invisible—pool, which is thus also reflector and reflexion, subject and object, but, as pool of all pools, God. This is an image of Hegel's world. He will have no *Jenseits*, no Yonder and Again; all shall be *Diesseits*, a perpetual Here and Now. God shall be no mystery; he will know God. He will apply the predicates and name the subject. The logical formulæ are the real predicates of God. God is that real and concrete—not that unreal and abstract, not that nonentity and nowhere that is understood as *le dieu français*, the Dieu of the Philosophes, the Gallic God, the infidel God. Being and Non-being are the ultimate secrets of the universe, the ultimate and essential predicates of God.'

§ V. PANLOGISM.

By Erdmann, Hegel's system is happily characterised as Panlogism rather than Pantheism, since instead of presenting the universe as the evolution of God, he presents it, and God also, as the evolution of the Logos, the concretion of the Abstract Idea. God only comes into existence when the Notion developes into Self-consciousness.

We have glanced at the Process and its evolutions in Logic; let us now glance at its evolutions in Nature and History. In the former we had only to deal with abstractions; and it was no difficult matter for Hegel to exhibit the 'genesis of ideas'—the dependence of one formula upon another. Verbal distinctions were sufficient there. But verbal distinctions avail nothing in attacking the problems presented by Nature; in endeavouring to give scientific solutions, Nature is not to be coerced. Aware of the difficulties—seeing instinctively that the varieties of Nature could not be reduced to the same simplicity as the varieties of the *Idee*—as Thought had been reduced in his *Logic*—Hegel asserted that the determinations of the *Idee* in its *exteriority* could not follow the same march as the determinations of the *Idee* as Thought. Instead of generating each other reciprocally, as in the *Logic*, these determinations in Nature have no other connection than that of co-existence; sometimes indeed they appear isolated.

When we look abroad upon Nature, we observe an endless variety of transformations. At first these seem without order; on looking deeper, we find that there is a regular series of development from the lowest to the highest. These transformations are the struggles of the *Idee* to manifest itself *objectively*. Nature is a dumb Intelligence striving to articulate. At first she mumbles; with succeeding efforts she articulates; at last she speaks.

Every modification which the *Idee* undergoes in the sphere of pure Thought it endeavours to express in the sphere of Nature. And thus an object is elevated in the scale of creation in so far as it resumes within itself a greater number of qualities: inorganic matter is succeeded by organic, and amongst organised beings there is a graduated scale from the plant up to man. In man the *Idee* assumes its highest grade. In Reason it becomes conscious of itself, and thereby attains real and positive existence—the highest point of development. Nature is divine in principle (*an sich*), but we must not suppose it divine *as it exists*. By the Pantheists Nature is made one with God, and God one with Nature. In truth, Nature is but the exteriority (*Aeusserlichkeit*) of God: it is the passage of the *Idee* through imperfection (*Abfall der Idee*). Observe, moreover, that Nature is not only external in relation to the *Idee*, and to the subjective existence of the *Idee*, namely, Intelligence; but exteriority constitutes the condition in virtue of which Nature is Nature (*sondern die Aeusserlichkeit macht die Bestimmung aus, in welcher sie als Natur ist*).

The Philosophy of Nature is divided into three sections—Mechanics, Physics, and Organics. Into the details, we are happy to say, our plan forbids us to enter; or we should have many striking illustrations of the futility of that Method which pretends to construct the scheme of the world *à priori*. Although he asserts that Nature is only there in order to be known,* he is forced to admit that much is unknown; but this is because Nature is too impotent (*ohnmächtig*) to obey Reason everywhere; she exhibits much that is mere chancework and insignificant. Experimental philosophers—Newton especially—are treated with consistent contempt. Hegel is not a timid speculator; he recoils from no consequence; he bows down to no name; he is impressed by no fact, however great. That Newton's speculations should be no better than drivel, and his 'discoveries' no better than illusions, were natural consequences if Hegel's theories were true. That all Europe had been steadily persevering in applying Newton's principles, and extending his discoveries,—that Science was making gigantic strides, hourly improving man's mastery over Nature, hourly improving the condition of mankind,—this fact, however great it might appear to others, when coupled with the other fact, that upon the ontological Method no discoveries had yet been made, and none seemed likely to be made—appeared to Hegel as unworthy of a philosopher's notice. The interests of mankind were vulgar considerations, for which there would always be abundant vulgar minds. The philosopher had other objects. 'Philosophy dwells in the region of self-produced ideas, without reference to actuality.'

What then was Philosophy, in his view? It was the substitution of Thoughts (Categories, or more precisely

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* So also God only exists in as far as He is known: 'Ein Gott, der sich nicht dem Menschen zu erkennen gäbe, wäre gar kein Gott.' FRANZ und HILLERT: *Hegel's Philosophie in wörtlichen Auszügen*: Einleitung, p. xviii.

Notions), in place of particular ideas (*Vorstellungen*)—it was the movement of pure Thought *as* thought, abstracted from all content; it was therefore not amenable to canons of Experience, which dealt only with the concrete perishable phenomena. And hence, if Philosophy is in his hands found flagrantly at variance with Science, that may cause distress to the followers of Empiricism, but will in no wise disturb him. To all the contradictions presented by Experience, he will answer, Contradiction is the essence of Philosophy.

The third and last part of Hegel's system is the Philosophy of Intelligence. Therein the *Idee* returns from Nature to itself, and returns through a consciousness of itself.

Subjectively, the *Idee* first manifests itself as a Soul; it then returns upon itself, and becomes Consciousness; and finally affirms itself as an Object to itself, when it is Reason. By this it preserves itself.

'For Thought is that *Universal*—that *Species* which is immortal, which preserves identity with itself. The particular form of Spirit not merely passes away in the world by natural causes in Time, but is annulled in the automatic self-mirroring activity of consciousness. Because this annulling is an activity of Thought, it is at the same time conservative and elevating in its operation. While, then, on the one side, Spirit annuls the reality, the permanence of that which it *is*, it gains on the other side, the essence, the Thought, the Universal element of that which *it only was* [its transient conditions]. Its principle is no longer that immediate import and aim which it was previously, but the *essence* of that import and aim.

'The result of this process is then that Spirit, in rendering itself objective and making this its being an object of thought on the one hand destroys the determinate form of its being, on the other hand gains a comprehension of the universal element which it involves, and thereby gives a new form to its inherent principle.'

Objectively the *Idee* manifests itself as Will, and realises itself in History and in Law.

The Subjective and Objective manifestations being thus marked out, we have now to see in what manner the identity of the two will manifest itself. The identity of the Objective and Subjective is the *Idee*, as Intelligence, having consciousness of itself in individuals, and realising itself as Art, as Religion, and as Philosophy.

The 'Lectures on the Philosophy of History,'* is of all his works perhaps the most interesting to the general reader; and is the only one that has been translated into English. The following ideas will be sufficient to give an indication of the method.

History is the development of the *Idee* objectively—the process by which it attains to a consciousness of itself by explaining itself.† The condition of Intelligence is to know itself; but it can know itself only after having passed through the three phases of the method, namely, affirmation, negation, and negation of negation, as the return to consciousness endowed with reality. It is owing to these phases that the human race is perfectible.

States, Nations, and Individuals represent the determinate moments of this development. Each of these moments manifests itself in the constitution, in the manners, in the creeds, in the whole social state of any one nation. For this notion it is we call the spirit of the age: it is the only possible truth, and by its light all things are seen. But with reference to the absolute *Idee*, all these particular manifestations are nothing but *moments* of transition—instruments by which the transition to another higher moment is prepared. Great men are the incarnations of the spirit of the age.

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* *Werke*, ix.

† History is a sort of Theodicea; the merit of originality, however, which HEGEL claims (*Einleitung*, p. 20), is due to Vico, from whom he has largely borrowed; VICO expressly calls his New Science a *Civil Theology of Divine Providence.* See his *Principi di una Scienza Nuova*, translated by MICHELET: *La Science nouvelle.*

It is not every nation that constitutes itself into a state: to do that, it must pass from a family to a horde, from a horde to a tribe, and from a tribe to a state. This is the formal realisation of the *Idee.*

But the *Idee* must have a theatre on which to develope itself. The Earth is that theatre; and the Earth, as the geographical basis of History, has three great divisions:—1. The mountainous regions. 2. The plains and valleys. 3. The coasts and mouths of rivers. The first represents the primitive condition of mankind; the second the more advanced condition, when society begins to be formed; the third, when, by means of river-communication, the activity of the human race is allowed free development in all directions, particularly of commerce. This is another of the ideas of Vico,* and is in contradiction to all history.

The great *moments* of History are four. 1. In the *East* we have the predominance of substantiality: the *Idee* does not know its freedom. The rights of men are unknown because the East knows only that *one* is free. This is the *childhood* of the World. 2. In Greece we have the predominance of individuality. The *Idee* knows that it is free, but only under certain forms, that is to say, only *some* are free. Mind is still mixed with Matter and finds its expression therein; this expression is Beauty. This is the *youthhood* of the World. 3. In Rome we have opposition between the Objective and Subjective: the political universality and individual freedom both developed, yet not united. This is the *manhood* of the world. 4. In the Teutonic Nations we have the unity of the contradiction—the *Idee* knowing itself; and instead of supposing like Greece and Rome that *some* are only free, it knows that *all* men are free. This is the *old-age* of the world; but although the old-age of body is weakness, the old-age of Mind is ripeness. The first form of government which we see in History is Despotism; the second is Democracy and Aristocracy; the third is Monarchy.*

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* *La Science nouvelle,* livre i. ch. ii. § 97.

On reading this meagre analysis, the ingenious speculations of the original will scarcely be recognised. Such is the art with which Hegel clothes his ideas in the garb of Philosophy, that we, though aware that he is writing fiction, not history, and giving us perversions of notorious facts as the laws of historical development;—telling us that the Spirit of the World manifests himself under such and such phases, when it is apparent to all that, granting the theory of this World-spirit's development, the phases were *not* such as Hegel declares them to have been;—although we are aware of all this, yet is the book so ingenious that it seems almost unfair to reduce it to such a *caput mortuum* as our analysis. Nevertheless the principles of his philosophy of History are those we have given above. The application of those principles to the explication of the various events of History is still more ingenious.

Hegel's *Philosophy of Religion* has in the last few years been the subject of bitter disputes. The schisms of the young Hegelians—the doctrine of Strauss, Feuerbach, Bruno Bauer, and others—being all deduced, or pretended to be deduced, from Hegel's system, much angry discussion has taken place as to the real significance of that system. We leave the matter to theologians; and for the present only notice Hegel's fundamental ideas.

It is often a matter of wonder to see how Hegel's Method is applied to all subjects, and how his theory of life can be brought to explain every product of life. This is doubtless a great merit; and it inspires disciples with boundless confidence. Few, however, we suspect, have approached the subject of Religion without some misgivings as to the applicability of the Method to explain it. Probably the triumph is great when the applicability is shown to be as perfect here as elsewhere. Of this our readers shall judge.

Hegel of course accepts the Trinity; his whole system is

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* *Philosophie der Geschichte*, p. 128.

Trinitarian. God the Father is the eternal *Idee an und für sich*: that is to say, the *Idee* as an *unconditioned* Abstraction. God the Son, *engendered* by the Father, is the *Idee* as *Andersseyn*: that is to say, as a *conditioned* Reality. The *separation* has taken place which, by means of a *negation*, gives the Abstraction real existence. God the Holy Ghost is the Identity of the two; the *negation of the negation* and perfect totality of existence. He is the Consciousness of himself as Spirit: this is the condition of his existence.

God the Father was before the World, and created it. That is to say, he existed *an sich*, as the pure *Idee*, before he assumed any reality. He created the World, because it is the essence of his being to create (*es gehört zu seinem Seyn, Wesen, Schöpfer zu seyn*). Did he not create, then would his own existence be incomplete.

The vulgar notion of theologians is that God created the world by an act; but Hegel says that the creation is not an act, but an eternal moment,—not a thing *done*, but a thing perpetually *doing*;—God did not *create* the world, he is eternally *creating* it. Attached also to this vulgar notion, is another less precisely but more commonly entertained; namely, that God, having created the world by an act of his will, lets it develope itself with no interference of his; as Goethe somewhere ridicules it, he 'sits aloft seeing the world go.' This was not the doctrine of St. Paul, whose pregnant words are, '*In him* we live, and move, and have our being.' We live *in* God, not out of him, not simply by him. And this is what Hegel means when he denies that the creation was a single act. Creation was, and is, and ever will be. Creation is the reality of God: it is God passing into activity, but neither suspended nor exhausted in the act.

This is all that we can here give of his *Philosophy of Religion*; were we to venture further, we should only get ourselves entangled in the thorny labyrinth of theological problems. Let us pass therefore to his *History of Philosophy*, which, according to him, is the history of the development of the *Idee* as intelligence. This development of thought is nothing more than the various transitions which constitute the *moments* of the absolute Method. All these *moments* are represented in history; so that the *History of Philosophy* is the reproduction of the *Logic* under the forms of intelligence. The succession of these moments gives to each period a particular philosophy; but these various philosophies are, in truth, only parts of the one philosophy. This looks like the Eclecticism of Victor Cousin; and indeed Cousin's system is but an awkward imitation of Hegel: the Frenchman has either misunderstood, or has modified, the views of his master.

Historically speaking, there have been, according to Hegel, but two philosophies—that of Greece and that of Germany. The Greeks conceived Thought under the form of the *Idee*; the moderns have conceived it under the form of *Spirit*. The Greeks of Alexandria arrived at unity; but then unity was only ideal, it existed objectively in thought. The subjective aspect was wanting: the totality knew itself not as subjective and objective. This is the triumph of modern philosophy.

The *moments* have been briefly these:—1. With Thales and the Eleatics, the *Idee* was conceived as pure Being: the One. 2. With Plato it was conceived as Universal, Essence, Thought. 3. With Aristotle as Notion (*Begriff*). 4. With the Stoics, Epicureans, and Sceptics, as subjective Notion. 5. With the Alexandrians as the totality of Thought. 6. With Descartes as the Self-Consciousness. 7. With Fichte as the Absolute, or *Ego*. 8. With Schelling as the Identity of Subject and Object.

§ VI. CRITICISM OF HEGEL.

Of all celebrated thinkers Hegel is the most difficult to be understood. His very disciples and commentators are ready to deny each other's interpretations; and according to a current epigram, which though probably mythical has nevertheless the truth of a myth, Hegel himself declared that only one of his disciples had understood him—adding with a sigh 'and he misunderstood me.' No greater condemnation of a system could be uttered.

The first difficulty is Hegel's style. It is a serious one. Not that he writes the shameless, slovenly, confused style of Kant; far from it; his sentences are well constructed, the expression sometimes eloquent and powerfully epigrammatic.* But he has a repulsive terminology, and a habit of always preferring the abstract expression to the concrete, which after a while gives the reader a sense of being raised above our mother earth into an atmosphere extremely rarefied and slightly mephitic.† This, however, is by no means the worst. With due patience, the terminology may be mastered, and the abstractions may be translated into intelligible concretes. The real exasperation begins with our detection of his slipperiness and ambiguity: 'The sense is often multiform, like a gypsy's prophecy or the scrolls of the alchemists.' This felicitous description is by an ardent disciple,‡ who elsewhere confesses § that 'Hegel often uses words in their directly derivative sense, that this sense and the usual sense as it were coquet with each other into a third sense.' Is not this indeed the application of his dialectical Method to language?

In his *Logic* he makes it a special merit of the German language that more than all other modern languages it permits of this ambiguity, many of its words containing not only different but directly opposed meanings 'so that a speculative spirit in the language is not to be overlooked.' ‖ He takes occasion to comment in a special section on the word *aufheben*, which, having the contradictory meanings of to suppress and to preserve, plays an immense part in his system. 'It is striking to find language,' he says, 'using the same word for two contradictory predicables. To speculative thought, it is gratifying to find words which have a speculative meaning in their own selves. The German language has a considerable number of them.'*

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* What can be finer than his retort upon the vulgar phrase 'no man is a hero to his valet—not because the hero is not a hero but because the valet is a valet'? Again a few lines further on he says that Thersites is a standing figure for all times: if he does not always get beaten, as in Homer, his envy and egotism rankle in his flesh, and the undying serpent that gnaws him is the pang of seeing his suggestions and vituperations wholly without influence on the course of events. *Philos. der Geschichte*, p. 40.

† On this point compare what he says *Encyklopädie*, § 3, p. 7.

‡ Stirling: *Secret of Hegel*, I. 67.

§ *Ibid.* 254.

‖ Hegel: *Logik.* Vorrede zur zweiten Ausgabe. Comp. also p. 27.

He is fond of revealing philosophic principles involved in ordinary terms, and his derivations are often as ingenious as they are etymologically incorrect. If we were to derive 'Devil' from 'Do Evil,' in defiance of philology which proves it to be derived from *Diabolus*, we should pursue his plan when he derives Judgment, *Urtheil*, from *Ur Theil*, as 'the primitive separation of the Notion,'† in defiance of philology which proves *urtheilen* to be the old German *ordalen* 'to tell'—whence *ordalie* 'narrative,' and our English 'tale.' And so of many others.

Difficult as the style is, there is a greater difficulty in placing ourselves at Hegel's point of view, seeing the argument as it is seen by him. This indeed is the main difficulty in all systems which have a different basis from our own system. We incessantly introduce our own point of view; and when this introduction produces, as often it must produce, a manifest disturbance, we are but too ready to assign the discrepancy to the system we oppose, and thus credit it with the contradiction we have created. This is inevitably the case in our study of Hegel, unless we are vigilant. He so often insults common sense, and so flagrantly disregards the conclusions established by experience and science, that the exasperated reader judging him from these standing points is tempted to turn away in disgust; or lets the book fall from his hands in the weariness of perpetual want of sympathy. Yet, as even those who have been most perplexed and wearied will admit that Hegel was neither a fool nor a lunatic, it is clear that if he disregards the objections of Common Sense and Empiricism, it must be because he refuses to recognize their claims to be heard at all in questions of Philosophy.* And so it is. Two things excite his measureless contempt: 1. The psychological investigation of the necessary limitations of Knowledge—that is to say enquiries into the *genesis* of ideas — and 2, the attempt to gain insight into philosophical problems by using Experience as a platform. Inductive Psychology, and Empirical Inductions, except when confined to the vulgarest purposes of Science, he doffs aside; and justly, since if their claims be admitted, his system tumbles into ruin.

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* *Logik*, i. 110. The translation in the text is by Mr. STIRLING, *op. cit.* i. 356.

† *Ibid.* iii. 63, 65. This, however, is not original with HEGEL; I find it in BARDILI's *Grundriss der ersten Logik*, 67, where *Urtheil* is the direction of Thought towards an object, *quasi divisio primaria objecti.*

Taking his stand upon the identity of Being and Knowing, which was the undisputed platform of Philosophy in his country, he saw that since Nature was thus simply the externality of Mind,—if the order in phenomena is identical with the order in ideas,—a complete explanation would be given could the process of Thought be explained.

The laws of *Thought* would be the laws of *things thought.* The laws of Thought as Thought, constitute the science of Logic. But instead of accepting the ancient division of Logic and Metaphysics, or the laws of Thought and the laws of Things, we must, he said, absorb the two into one, and present a Logic which is also a Metaphysic. The categories will thus form the skeleton of the universe.

The process of Thought, its dialectical movement, is Thesis (Affirmation), Antithesis (Negation), and Synthesis (Unity); otherwise Premiss, Judgment, and Conclusion. This also must be the process of objective evolution, namely, Being, Non-Being, and Becoming—Possibility, Actuality, Reality,—Generality, Particularity, Singularity. The dialectical movement is a concretion of the Abstract, a specification of the

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* He would have smiled at the epigram in which M. Ott expresses the feeling of ordinary readers, struck with the absurdity of the Method of Negation: 'Or la négation la plus claire en ceci, c'est la négation du sens commun, c'est le renversement de toute la logique humaine.' *Hegel et la Philosophie allemande.* Paris, 1844, p. 98.

General, a differentiation of the One into the Many, and the return again of the Many into the One—a birth, a development, and a death which is also new birth.

Just as physicists generalize all particular phenomena into their Laws, and then treat these as the eternal verities and immanent causes of change, so Hegel having seized the abstract and eternal categories or general laws of Thought, saw in them the immanent causes of all changes, inward and outward. Finding a process of incessant negation, or limitation, underlying all specification, he erected this principle of Contradiction into the generating process.

It is thus I endeavour to rethink his thought. Whatever estimate one may form of it, one must at least acknowledge a rigid consistency very unlike the chaotic lunacy it presents from an outside view. The great problem before him was how to interpret the co-existence and succession of phenomena? which presented itself in this question, What is the relation of the subjective to the objective? His solution proceeds on the assumption, common to all metaphysical systems, that the *processes* of Creation are revealed in Thought, but he carried this assumption further by affirming an *identity* where more timid speculators saw only a *mirroring*, or intuition. He remarks of Empiricism 'that instead of seeking the True in Thought itself, it endeavours to draw it from *Experience* of the inward and outward present.' * It seeks concretes, particulars, and raises them into general concepts, propositions, laws. 'But this, however, has only the meaning that such generalities—e.g. Force—have no further reach than such as is given in Perception, and only refers to the demonstrable connexion of phenomena.' 'The rigorous logic of Empiricism, inasmuch as it limits itself to the Finite, altogether denies the Suprasensible, or at least the knowledge of it, and leaves to Thought only Abstraction and formal Universality and Identity. The fundamental illusion of Empiricism is this, that it employs the metaphysical categories of Matter, Force, besides those of One, Many, Universality, Infinitude, &c., moreover by means of these concludes, thereby presupposing the forms of Conclusion, and in all this never suspects that it is metaphysical.' Empiricism has only Perception, and Perception is always of the singular and transitory; whereas knowledge refuses to remain standing still here, but seeks, in the singular and transitory, what is universal and permanent. This is Experience. Its instrument is analysis. But here it commits the error of supposing that when it has analysed objects it leaves them as it found them; whereas it has transformed the concrete into the abstract. Its differences are abstract specifications, i.e., Thoughts. 'Since then these thoughts represent what the Things are in themselves, we return to the old metaphysical assumption that the truth of Things lies in Thought.'* In a word, Empiricism fails wholly to reveal Universality and Necessity.

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* *Encyklopädie*, § 37.

'The critical philosophy of Kant in common with Empiricism accepts Experience as the only ground of knowledge, but this knowledge is only that of phenomena, not that of Truth.' But Kant drew Universality and Necessity from another source, the spontaneous or *à priori* determinations of Thought. These categories constitute the objectivity of Experience.† Wherein then does Hegel differ from Kant? In this, that Kant regarded the identity of object and subject as an identity limited to Consciousness—it was a truth of Experience; but transcendentally it was no truth at all, for no such conceptions as those of object and subject could be transcendentally applied. Hegel tearing down the barrier between Experiential and Transcendental—denying the existence of the assumed *Ding an sich*—made the identity in Consciousness an absolute identity. Thus while Kant affirms the categories to be applicable only to phenomena, to our subjective condition, and to have no application whatever to *things in themselves*, Hegel, utterly denying the distinction between phenomena and noumena, declaring the *Ding an sich* to be a thought, obliterates the distinction between objective and subjective, uniting them in a higher category; and he is thus led to regard the categories as physicists regard laws.

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* *Op. cit.* § 38.

† *Op. cit.* § 40, 41.

Before proceeding to exhibit the point of intersection and the derivation of Hegel from Kant, it may be useful here to say a word on the distinction of Objective and Subjective. Hegel remarks an essential defect in Kant's view of the categories, that it does not consider them in themselves, but only whether they are objective or subjective. The ordinary sense of objective, is whatever is external, and only to be reached through perception. And since such categories as Causality have not this objectivity, not being given in perception, Kant declared them to be subjective, belonging to the spontaneity of Thought. But he also named what is *thought* (more particularly the Universal and Necessary) objective, and what is only *felt*, the subjective. The contradiction is only superficial. Sensations are subjective in as far as they are ours only—mine, not yours, or his—and thus incapable of being communicated. But thoughts are objective in as far as they are every one's,—they carry their own signatures, and are universally intelligible—they admit of demonstration, or being *shown* to others. Thoughts are objective, in the sense of being independent of every subject;* and they are the permanent; whereas feelings are only of the transitory; thoughts are of the general, whereas feelings are only of the singular.

This distinction which Kant has brought out we also find in the language of culture. Thus in judging of a work of Art, we are required to take the objective not the subjective point of view, that is to say not the particular fancy and mood of the spectator, but the higher vision of Art in its nature and essence.†

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* A fallacy. Thoughts are not *independent of* but *common to* the subjects. Take away the *thinking subjects*, and the asserted independence vanishes.

† *Encyklopädie*, § 41, Zusatz 2.

But Hegel, rejecting the Kantian position that even this latter form of objectivity is after all only subjective, since the categories are only *our* forms, and are divided by an impassable chasm from things in themselves, declares 'the true objectivity of Thought to be this, that thoughts are not only our thoughts, but are at the same time the *in itselfness* of things and objects in general.' Although it is perfectly true that the categories are not immediately contained in sensations, but belong to Thought, it by no means follows that they are therefore only ours, and not also conditions of the objects.*

From Hegel's point of view, namely that of Absolute Idealism, this is indisputable. The identity of object and subject being affirmed, whatever is true of the one must be equally true of the other. According to Kant, whatever we think is false (transcendentally) because it is our thought; according to Hegel, whatever we think is true, because we think it. He says: 'Kant pretends that the ideas or notions of things are conveyed to us by means of general forms called Categories; and he adds that by means of these,viz., Quantity, Quality, Relation, and Modality—we form a synthesis *à priori* without any cooperation on the part of our senses. But Kant, who in affirming this had entered on the path of truth, was not able to deduce from his principles all the consequences. In the remainder of his philosophy he has embraced that common error which affirms that ideas or notions of things are fortuitous abstractions made by the mind, and that things are absolutely impenetrable to us. Proceeding further on the course which Kant abandoned too soon I have arrived at a reconstruction of Logic.'†

It is here the point of intersection may be found. Hegel complains that Kant has not deduced his Categories, but simply taken those which the old books of Logic furnished.

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* *Encyklopädie*, § 42, Zusatz 3.

† *The Subjective Logic of Hegel*, translated by H. Sloman and J. Wallon, London, 1855, p. 19. This little work, not a translation but a digest of some portions of the Subjective Logic, can be recommended to the English reader about to commence the study of Hegel.

Whence does the Ego, which is simply the abstract unity of self-consciousness, derive its concrete determinations, or forms? This deduction is Hegel's special object. But without pausing here to examine its validity, let us ask, How does the Logical become Real, how are the Forms of Thought shown to be at the same time Forms of Things? The answer must be sought in the identification of the Notion with the Absolute. 'Being and Essence are but moments of its Becoming; it (the Notion) is, however, their ground or *fundamen*, their Truth, as the identity in which they have perished and are contained. They are contained in it because it is their Result, but no longer as Being and Essence; they have these specifications only so far as they have not returned into Unity.'* Kant's Categories are functions of the understanding which have no content, being simply formal and deriving their material from Sense. But Hegel, dissolving the assumed opposition of Sense and Understanding, denied the asserted distinction of formal and material to be other than logical. He thus materialized the Categories.

Having thus, not without effort, tried to present the system as a coherent deduction, we have now to ask: Is the foundation solid? Can we accept this revelation of the process by which the universe is evolved? Can we accept the Logic as an organon of discovery?

I. *As an organon.* It claims to deduce the multiple phenomena of the universe as concretions of the Abstract Idea through its immanent dialectical movement. It holds the keys. Now the first remark to be made is that this Method is not in the least the deductive Method it pretends to be. It gives us a Rubric and pretends to give a Deduction. By Deduction we reach unsuspected truths, undisclosed particulars. A verbal generality discloses nothing but verbal applications;

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* 'Seyn und Wesen sind insofern die Momente seines Werdens; er aber ist ihre Grundlage und Wahrheit, als die Identität in welcher sie untergegangen und enthalten sind. Sie sind in ihm, weil er ihr Resultat ist, enthalten, aber nicht mehr als Seyn und als Wesen; diese Bestimmungen haben sie nur insofern sie noch nicht in diese ihre Einheit zurückgegangen sind.' *Logik*, iii. 5.

a generality gathered by Induction from phenomena is seen to have wide-reaching applications and illuminations of obscure places. Once let the elements be given, and from them we can deduce the resultant, before that resultant has yet been manifest to sense:—the existence, and local position of a planet, with its orbit, can be deduced from the elements of perturbation in the movements of other planets. Hegel's Rubric has no such reach. It can but assign a place to discoveries already made. No single unexpected disclosure was ever made by it; many undeniable disclosures obstinately refuse to be included in it. It has excited awe and admiration by its universality of application; and there is something truly fascinating in this appearance of grasp.

Admitting that it is no Organon of discovery, we might still prize it highly as a vast Classification— were the Classification only valid, *natural*, serviceable, instead of being arbitrary and useless, useless because arbitrary. Its pervading vice is the metaphysical vice of dealing with abstracts in disregard of the concretes from which they have been, or ought to have been abstracted; consequently whenever we restore the discarded concretes we disclose the futility of the scheme.

The friend, already referred to, objects that in this passage I am 'arbitrarily assuming the point of view opposite to Hegel's, who conceives that Knowledge is abstract or void of definiteness before it is concrete or defined. He would say that it is a mistake to suppose that our first knowledge of a physical phenomenon is concrete, that the phenomenon is concrete to us when we first become aware of it. It only becomes so gradually as we compare it with other phenomena and relate it to all its conditions.' Unquestionably I am assuming the opposite point of view to Hegel's. I conceive that he altogether misrepresents the genesis of experience, and that he confounds a confused conception with an abstract conception, when he supposes that our sensible experiences are abstract before they are concrete. The *obliteration* of particulars, which is Hegel's plan, is a very different procedure from the *subsumption* of particulars and their expression in a symbol, which is the Notation of Science. Take an example: when a man is killed by the fall of a tile from the house-top, he is not killed by the tile itself, says Hegel, 'since the effect is only produced by the acquired velocity—that is to say the man is killed by Time and Space—*der Mensch wird durch Raum und Zeit todtgeschlagen*!'* The absurdity here arises from disregarding the tile, its mass and cohesion, as factors in the result. Does he suppose that if a snowball acquired the velocity of a cannon-ball it would equally shatter a parapet? The physicist is at liberty to disregard all particulars, if he *subsumes* them in his notation, e.g. whether the projectile be of wood, iron, brick, or water is indifferent to him; all that his formula needs is a given density, mass, with a given velocity.

Another example: the instinct of Reason, Hegel says, necessarily seeks the purification of the Notion. When a Law first appears it is impure, shrouded in the particulars of Sense, and the Notion which constitutes its nature is sunk in Sense. Reason endeavours to free it, and thus raise it out of its imprisonment in the moments of conditioned Being. 'Thus the relation of Acid to Base and their movement towards each other make a Law, in which these opposites appear as bodies. But these separated things have no reality; the force which tears them asunder, cannot hinder them immediately from uniting again, for they exist only in this relation. They cannot remain for themselves, like a tooth or a claw, and so be shown. That their *essence* consists in passing over into a neutral product, makes their *being* an *in-itself-subsumption* (*Ansichaufgehobenem* — which may be paraphrased 'that whose essential character is its tendency to suppress itself')—or an Universal; and Acid and Base have only truth as *Universal*.' †

It is perfectly true that an Acid has only the significance of an *acid* in reference to a base, and *vice versa*. But the body which is acid in reference to a base, exists quite irrespective of the base; and Hegel's assertion that it is non-existent in itself, becomes the more untenable when juxtaposed to the assertion that a tooth, or a claw, exists for itself. The tooth and claw are only *tooth* and *claw* in relation to the objects bitten and clawed, as an acid is only an *acid* in relation to the objects it oxidizes.

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* *Phänomenologie*, p. 192.

† *Encyklopädie*, § 261.

But this arbitrary suppression of integral factors is systematic with Hegel; indeed he proclaims it to be the instinct of Reason. Thus, to take an illustration from another sphere, when he declares that 'Spinoza thinking Substance is nothing but the *Notion developing itself as substance*,' he is consistent with his assumption of the History of Philosophy being only the successive stages of the evolution of the *Idee*. He would say that in consequence of this necessary evolution, Spinoza's personal existence was needless, the successive stages would have gone on had there been no Spinoza. It is in this sense we so often hear that gravitation would have been discovered had Newton never lived. There is truth in the remark, but it suppresses an implied condition, namely, if not Spinoza and Newton, then some *other* mind or minds of equivalent force! Are we to suppose that Gravitation would *disclose itself*; or that Science in the abstract, floating away from scientific thinkers, would evolve the law?

Throughout his historical, no less than throughout his speculative labours, may be noticed this arbitrary suppression of concretes which do not fit into his scheme. This is seen in his *Phänomenologie* which pretends to expound the evolution of Consciousness through History. As Haym truly says: 'It is no presentation of how the Spirit of the World has evolved itself, but how it might have done so, and must have done so had it accommodated itself to the scheme of the abstract theory of Consciousness. The historic figures are thrown chaotically together. The selection is absolutely arbitrary. When the writer is familiar with some historical figure, or has recently met with it in his reading, he seizes on it as a symbol of a necessary and inevitable stage of developing Consciousness. Yet if the spirit of the French

Revolution is elevated to this dignity, one sees not why the characteristic spirit of Puritanism in its struggle against Charles I. was not worthy of a similar regard. If the transition from the classic to the Middle Ages is raised into typical significance, how comes it that the not less remarkable transition of the renaissance is unnoticed?' *

The source of the error here, as in so many other cases, is the fallacy which deals with an abstract in forgetfulness of its concretes; because Reason detaches the law from the particulars expressed by the law; this, which is at first only an artifice of Notation, becomes, in forgetfulness of its origin, a reliance on the law as self-subsistent, as 'freed from its imprisonment' in particulars; and thus freed, thus purified, the law seems to acquire a higher validity. Hegel believes that he has deduced the process of the world from the *Idee*; and it is no doubt true that he has explained how all the special notions we frame of the process, may be regarded as gradual evolutions of the Absolute Notion, how all concretes may be regarded as concretions of the Abstract. But inasmuch as it is equally easy to ascend from the special notions to the general notion, from concretes to their abstract, and thus reverse the scheme of evolution, we are called upon to decide between these two processes. Our decision cannot be doubtful when we perceive, as quickly we may perceive, that Hegel draws nothing out of his Absolute but what he had previously put into it; he can deduce no special notions except those which have already been supplied through special experience. His Rubric only embraces the already known. Had not experience furnished him with concepts of Motion, Quality, Quantity, Becoming, Reality, Space, Time, Thought, and the rest, he could not have exhibited them as evolutions of Being and Non Being, pure and simple.

In one word, the truth of things is not to be attained by the *suppression* of particulars, but by their *comprehension* in a general concept. The Universal which is a negation of particulars, is a phantasm; the Universal which is a notation of particulars, is a scientific artifice.

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* HAYM: *Hegel und seine Zeit,* 1857, p. 242.

II. *As a revelation.*—On a first acquaintance the system looks more like an old philosophical ragshop wherein the exploded fallacies of Antiquity and the Middle Ages—the frippery which was once the finery—are offered for sale. Those primitive errors, which one hoped to have been finally disposed of—Matter and Form—Universals—Virtual and Actual—the Logos—the Many and the One—the Nothing as existent—are reproduced as primary truths. We are for ever meeting with Plato, Aristotle, Plotinus, and the Schoolmen, not under new lights, strengthened with firmer supports, wearing a more plausible aspect, but only restated with confident calmness.

Philosophy is regarded as an evolution; not an epigenesis where one stage is supplanted by its successor, disappearing to give place to a more perfect form; but an evolution like that conceived by the early embryologists, namely the gradual unfolding of what was from the first folded up in the embryo. Hegel indeed denies that his system resembles the *emboîtement* theory, which taught that from the first the oak was contained in the acorn, the animal in the germ, and grew from this miniature into a life-size portrait. Let him be heard on the point.

'The progress of the Notion is neither the passage nor the appearance in Another, but Development, inasmuch as the Differenced is immediately affirmed (*gesetzt*) as the Identical with Each and the Whole, the specification (*Bestimmtheit*) as a free Being of the whole Notion.'

This not very luminous paragraph is thus enlightened:—

'The passage over into Another is the dialectical process in the sphere of Being and the appearance (*Scheinen*) in Another in the sphere of Essence. The movement of the Notion is on the contrary Development, through which only that is affirmed, posited, which is already present in itself (*durch welche nur dasjenige gesetzt wird, was an sich schon vorhanden ist*). In Nature it is in organic Life that we see the stages of the Notion expressed. It is thus, for instance, that the Plant developes itself from its germ. This contains already the whole Plant in itself, but in idea; and we must not conceive its development as if the different parts of the Plant, its root, stem, leaves, &c., were already *really* in the germ, only in miniature. Such a conception is the so-called *emboîtement* hypothesis, the defect of which is that it considers as already existing what is only ideally existing. The correct side of this hypothesis is that in it the Notion remains the same during its process, and adds nothing new to its ingest (*Inhalt*) but only brings forward a change of form.' *

It is on the same ground that he vindicates the existence of Innate Ideas, and Plato's doctrine of Reminiscence. Ideas exist *virtually* though not *actually*. We have here the recurrence of his tendency to suppress integral factors, to disregard all the elements which are incorporated in the course of the evolution, as if *they* were insignificant. What he supposes to exist *ideally* is simply a reflection of what has *really* occurred; thus he confounds a resultant with an antecedent; and upon the same method we might prove that ten was a million, because it contained the million ideally, because by multiplication it would engender a million. The seed does not contain the plant; the plant is developed only by a successive incorporation of foreign elements into its substance; and the plant varies as these incorporations vary. But because we can ideally retrace these successive steps, and thus reach the seed, the fallacy emerges which assumes that the result was contained in the starting point, and we say the plant is 'potentially contained' in the seed.

I have argued this question of potentiality in *Prolegomena*, §§ 50–52, and again vol. i. p. 317–19 and vol. ii. p. 281, and p. 525. The reader is requested to consider again what is there said, because the 'infirmity of thought' which it expounds, is one which pervades Hegel's system. It is this infirmity which dictates his position of the *Idee*: the

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* *Encyklopädie*, § 161, p. 317.

Thought, which on his own showing is the *last* stage of development, is erected into the *first.* The Universe which passes from unconsciousnes to consciousness, and from consciousness to self-consciousness, is made to be an evolution of this self-consciousness, i.e. its last stage. Precisely analogous is his position that all sensation is thought—a far more illogical position than that of Condillac, who made all thought sensation. Both positions rest on the same mistake of obliterating differences.

If we regard the evolution of the universe as the self-movement of the *Idee,* we must declare that the final stage no less than all the intermediate stages were contained *really* in the first, as the *emboîtement* theory declares the plant to be really contained in the seed. And for this reason. If the *Inhalt* (ingest or content,) be not enriched by the incorporation of foreign elements, but only undergo changes of form, the *reality* will never appear, the changes will continue restricted within the formal sphere. If, however, the incorporation take place, whence come the incorporated elements? In that case we assume an existent Matter independent of the Form; as for a real plant we require the existence of gases and salts independent of the Plant idea.*

The same objection rises against his conception of Universal History, as the evolution of the *Idee,* 'the exhibition of Spirit (*Geist*), in the process of working out the knowledge of that which it is potentially. And as the germ bears in itself the whole nature of the tree, and the taste and form of its fruits, so do the first traces of spirit virtually contain the whole of that History.' * Pause here to remark that not only is the germ made to contain all the future elements which must build up the structure of the tree, but the psychological elements of 'taste' and 'form,' which may hereafter coalesce with it in a percipient. He admits in the following passages all we claim:—

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* Schelling puts his finger on this weak spot when he observes that Hegel 'seems destined by Nature to introduce a new Wolfianism;' by this is meant that just as Wolf obliterated all that was positive in Leibnitz and Descartes to fashion a system in which nothing but abstract formalism remained, so Hegel, obliterating the real and living element which Schelling had proposed, as the origin of movement, as 'the power of passing into its opposite and returning to itself,' substituted for it the Notion or *Idee,* 'à laquelle, par la fiction la plus arbitraire et la plus étrange, il attribuait une faculté semblable de mouvement propre.' Schelling also truly says that the empirical element which Hegel at first excludes from his system he is forced to readmit by the back entrance, for the transformations of the Idee. Schelling: Preface to the Translation of *Cousin's Fragments*; translated by Paul Grimblot.

'What we call *principle*, *aim*, *destiny*, or the nature and idea of Spirit, is something merely general and abstract. Principle—Plan of Existence—Law—is a hidden, undeveloped essence, which *as such*—however true in itself—is not completely real. Aims, principles, &c., have a place in our thoughts, in our subjective design only; but not yet in the sphere of reality. That which exists for itself only, is a possibility, a potentiality; but has not yet emerged into Existence. A *second* element must be introduced in order to produce actuality—viz. actuation, realization; and whose motive power is the Will—the activity of man in the widest sense. It is only by this activity that that Idea as well as abstract characteristics generally, are realized, actualized; for of themselves they are powerless. The motive power that puts them in operation, and gives them determinate existence, is the need, instinct, inclination, and passion of man.

'The History of the World begins with its general aim—the realization of the Idea of Spirit—only in an *implicit* form (*an sich*) that is, as Nature; a hidden, most profoundly hidden, unconscious instinct; and the whole process of History (as already observed), is directed to rendering this unconscious impulse a conscious one. Thus appearing in the form of merely natural existence, natural will—that which has been called the subjective side,—physical craving, instinct, passion, private interest, as also opinion and subjective conception,—spontaneously present themselves at the very commencement. This vast congeries of volitions, interests and activities, constitute the instruments and means of the World-Spirit for attaining its object; bringing it to consciousness, and realizing it. And this aim is none other than finding itself—coming to itself—and contemplating itself in concrete actuality.

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* *Philosophy of History.* Translated by J. SIBREE, M.A. 1857 (In *Bohn's Philosophical Library*), a translation of the rarest merit.

'In relation to this independently universal and substantial existence—all else is subordinate, subservient to it, and the means for its development.—The Union of Universal Abstract Existence generally with the Individual,—the Subjective—that this alone is Truth, belongs to the department of speculation, and is treated in this general form in Logic.—But in the process of the World's History itself,—as still incomplete,—the abstract final aim of history is not yet made the distinct object of desire and interest. While these limited sentiments are still unconscious of the purpose they are fulfilling, the universal principle is implicit in them, and is realizing itself through them. The question also assumes the form of the Union of *Freedom* and *Necessity*; the latent abstract process of Spirit being regarded as *Necessity*, while that which exhibits itself in the conscious will of men, as their interest, belongs to the domain of *Freedom*.'

But since these elements are all subjective, all spiritual, we may claim them as concretions of abstract Spirit; and he has a good illustration here.

'The building of a house is, in the first instance, a subjective aim and design. On the other hand we have, as means, the several substances required for the work,—Iron, Wood, Stones. The elements are made use of in working up this material: fire to melt the iron, wind to blow the fire, water to set wheels in motion, in order to cut the wood, &c. The result is, that the wind, which has helped to build the house, is shut out by the house; so also are the violence of rains and floods, and the destructive powers of fire, so far as the house is made fire-proof. The stones and beams obey the law of gravity,—press downwards,—and so high walls are carried up. Thus the elements are made use of in accordance with their nature, and yet to co-operate for a product, by which their operation is limited. Thus the passions of men are gratified; they develope themselves and their aims in accordance with their natural tendencies, and build up the edifice of human society; thus fortifying a position for Right and Order *against themselves.*'

To which we may add: Here the existence of the building materials is presupposed; *without* these there can be no house built, no society evolved, let there be never so architectural an Idea; *with* these the house and society may be built, the structures depending incessantly on them, every alteration in them having a corresponding alteration in the realized ideal. But this Hegel will not allow. He says:—

'Here we have only to indicate that Spirit begins with a germ of infinite possibility, but *only* possibility,—containing its substantial existence in an undeveloped form, as the object and goal which it reaches only in its resultant—full reality. In actual existence Progress appears as an advancing from the imperfect to the more perfect; but the former must not be understood abstractly as *only* the imperfect, but as something which involves the very opposite of itself—the so-called perfect—as a *germ* or impulse. So—reflectively, at least—*possibility* points to something destined to become actual; the Aristotelian δύναμις is also *potentia*, power and might. Thus the Imperfect, as involving its opposite, is a contradiction, which certainly exists, but which is continually annulled and solved; the instinctive movement, the inherent impulse in the life of the soul—to break through the rind of mere nature, sensuousness, and that which is alien to it, and to attain to the light of consciousness, i.e. to itself.'

Nor can this be gainsaid by anyone who accepts the Aristotelian conception of virtual and actual. Which, however, must be rejected. The virtual is only a figment, which the actual may make a reality; until it is *made*, it does not *exist*. Hegel declares that 'Essence is a self-separation of Being' (*Das Wesen ist eine Selbstdiremtion des Seyns*). But the proposition is unthinkable inits naked simplicity, and only thinkable when it involves the very elements it pretends to evolve. Abstract Being, in which there is no difference, cannot be construed to Thought as 'separating itself from itself;' the difference must already be there before a separation can be thought as taking place; and if difference be already there, Being is no longer abstract, but contains Essence. In a word, Being and Essence are not real Categories, but logical distinctions.

Even German metaphysicians have resisted this proposition of pure Being splitting itself in two, and becoming Reality in the act. Schelling humorously suggests that the act itself was perhaps an escape from the ennui of a purely logical existence.*

Rejecting thus, as we are forced to reject, Hegel's fundamental conception of evolution, we need not pause to point out the reasons for refusing to accept his explanation of special evolutions. There is a third question, however, which must still be answered.

III. *Is the foundation solid?* Hegel may have failed in explaining the process of the universe; the failure is visible in the sudden ruin of his school. On the death of Alexander the empire fell to pieces; but the independent empires into which it merged, severally asserted their vitality. Hegel left no system capable of subsisting, but he left disciples; and even now, though scattered and sadly diminished in number, there are disciples who stand by his Method, hoping to erect on it a permanent system. That method we have already declared incompetent; we must now examine its foundation.

The foundation is the hypothesis of the identity of Object and Subject, of Being and Knowing. There is a sense in which this is indisputable; within the sphere of Consciousness the Object must be the Object Known. But we must ask: Is the sphere of Consciousness *coextensive* with the sphere of Existence? Is Consciousness a sphere within the wider sphere, one form of existence; or the reflex of the totality of Existence? To present the question in an image :—An organism is identical with *its* external medium, but not with the whole external medium. The organism is identical with the medium only at the points of intersection, namely those elements of the medium which are assimilated by the organism, and drawn into the vital current. The organism exists through and in these; it grows by the identification of them with itself. They, without ceasing to be physical and chemical integers, nevertheless assume new values as vital integers. Meanwhile, all the *outstanding* physical and chemical elements pursue their physical and chemical movements quite irrespective of the organism, and we know how hopeless would be the attempt to explain these by the assumption of their being also vital: since vitality is a specialised phenomenon, and if we vitalise the Cosmos we obliterate this very speciality. Now the attempt to explain Physics and Chemistry by biological laws, is equivalent to the attempt to explain cosmical processes by psychological laws.

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* 'L'Idée, on ne sait pourquoi, peut-être pour faire diversion à l'ennui de son existence purement logique, s'avise de se décomposer en ses moments qui constituent, dit-on, la création.' Preface to Cousin.

Of course this would be denied *ab initio* by those who accept Absolute Idealism, and regard the Object as only the reflection of the Subject. But we may in the first place remark that this position is hypothetical, it is not proved; and it is an hypothesis which has evidence so weighty against it, that very few minds can hold it. In the second place the hypothetical identity of Thought and Thing is only held to be valid in the region of abstractions, wherein things are replaced by Universals, and it is only with Universals that Philosophy is supposed to be concerned. Hegel explicitly warns us against interpreting his position in the sense that such or such external object must respond to my personal, individual, conception of it; such thoughts of mine can only be *just*; to be *true* they must be universal. Not my Notion, but *the* Notion corresponds with the Object, *is* the Object.

This gets rid of many a *primâ facie* objection, and reconciles many a seeming contradiction, but it does not furnish Philosophy with an available criterion. For observe the following dilemma:—There was once a time—nor is it very distant—when *all* men unhesitatingly conceived that the sun moved round the earth. This conception was not only general, it was universal; and it was not only universal, it was inevitable. Was it then true? did the objective fact correspond with the subjective conception? If it did correspond, the planetary movements must have suddenly changed at the period of Copernicus, changing to follow the change in scientific Thought. If it did not correspond, there was a serious breach of continuity between the outer and inner; and since there is no ground to assume this breach to be solitary, we must admit that Thought and Things are not always identical.

Nor indeed would Hegel claim such identity. He says indeed that 'Nothing *is* because it is a thought;' but as he would not admit that Hippogriffs, Gnomes, Fairies, and multitudes of thoughts have an objective existence, we must ask why the thought Nothing is endowed with reality; and we shall see that it is because Nothing is a *necessary* thought. So, I conclude, Hegel would answer the case of the sun's movement. It was not a necessary thought; it was not deduced from logical necessity, but inferred from sensible appearances.

The distinction may be accepted, and thereby the difficulty escaped; but what is not thereby escaped is the inapplicability of his principle as a criterion. If the identity of Subject and Object could be accepted in all important cases, that is, in cases which were important because they were general and not merely individual, because they were constant and not merely accidental, then indeed we might admit the criterion, as in science we admit Laws, and disregard particular cases. But if the identity fail in general and important cases, and can only be admitted in those rare cases wherein Thought is a *necessary* deduction, the contrary of which is not only unthinkable, but undeducible from any admitted premisses, of what value can such a principle be in explaining the phenomena of our universe? Failing in regard to individual opinions, failing in regard to general opinions, failing even in regard to universal opinions, it succeeds only with those opinions that are logically necessary. My thought is not true; only *the* thought is true. Here we are again thrown back on his definition of Truth (see page 614). To be consistent with such principles he should never apply them to phenomena; yet since philosophy does pretend to explain phenomena, some criterion is needed. Moreover, even within the restricted sphere to which he assigns it the principle fails; for, as we have seen (p. 607), his dialectic proceeds on absolutely unthinkable assumptions, the laws of thought (*Denkgesetze*) which he invokes, are violations of every intelligible principle.

Let us see how he treats the observation of Nature.* Thoughtless Consciousness declares that Observation and Experience are the source of Truth. It confounds sensible description with essential specification. It is mere superficial description of particulars, whereas that which is *intelligised* (*erkannt*), is more important than all the sensible properties which Consciousness may disregard. Through the distinction of the *essential* from the *non-essential*, the Notion raises itself from out the sensuous dispersion, and therein declares its cognition in that here it is dealing essentially as much *with itself* as with things. By this twofold essentiality it falls into perplexity as to whether that which is essential and necessary for cognition is equally so for things. On the one side must the *marks* only serve cognition whereby things are distinguished among each other; on the other it is not the non-essentiality of things that is known, but that whereby they *detach* themselves from the universal continuity of Being, *separate* themselves from others, and are *for themselves*. The marks must not only have an essential relation to cognition, but also the essential specifications of things, and the ideal system correspond with the real system.'

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* *Phänomenologie*, pp. 184–6.

The reader is probably initiated far enough into Hegel's phraseology and mode of thought to enable him to detect the argument here; but the passage now to follow will clear up any difficulty: 'The distinguishing marks of animals are for example drawn from their teeth and claws; for, in fact, not only does cognition thereby distinguish one animal from another, but the animal separates itself thereby; by these weapons, it sustains itself separated from the Universal. The plant, on the contrary, does not arrive at the *For-itselfness*, but only touches the limit of individuality; at this limit, where it manifests the appearance of separation (*Entzweiung*) in sex, it is on this ground accepted and distinguished.' *

On learning that the idea of a claw or a tooth is the subjective aspect of the objective fact, but that the idea of the sun's movement round the earth is *not* the subjective aspect of the objective fact—on learning further that inasmuch as the man *is* only what he has *done*, and that therefore 'his body is the self-produced expression of himself—*der von ihm hervorgebrachte Ausdruck seiner selbst*' †—and that in fact all external existence is but the reflex of internal thought—one feels the pressing need of some decisive criterion to decide which of our thoughts have correspondent existences, and which not. As far as I can see into this matter, Hegel would say that the criterion must be sought in the absolute identity—*whenever* the external movement corresponds with the dialectic movement, then, and then only have we the truth. It is not this phenomenon or that, not this *differentia* or that, not this opinion or that, which can be accepted as the objective-subjective, real-ideal. It is only the *differentia* which appears as a necessary moment in the dialectical process, that we can accept as a necessary moment in the creative process. But my objection remains: the identity is an hypothesis; and if it were granted, the criterion would remain barren and misleading, in all enquiries that have any significance for man.

Leibnitz conceived that inasmuch as the soul represented the universe with perfect accuracy though with imperfect clearness, the series of ideas must correspond with the changes in the universe.* Bayle objected that a dog who felt the pain from a blow on his back while eating, might easily pass from the sensation of pleasure to that of pain; but that he should equally pass from pleasure to pain, as the ordained series, whether struck or not, is inconceivable—hence the alleged parallelism between the series of ideas and the series of external facts fails. To this Leibnitz answered that such a case could not occur; if the series of ideas is preordained on the one side, the series of corresponding facts is equally preordained.† Nor can this answer be impugned; as an answer to Bayle it is conclusive. But how will it avail in the case previously urged respecting the earth's movement? The preordained series of ideas in every mind (up to the coming of Copernicus) was one representing a series of facts, which since Copernicus has been recognised as directly the reverse; the representation was of an universe in which the sun revolved round the earth; the facts are now proved to have been diametrically opposed to this representation. Are we to rescue the principle of parallelism by assuming that with the change in the series of ideas there came about a corresponding change in Nature? Are we still to maintain with Hegel that 'the activity of the subjective notion is on the one side only the development of that which is already in the object, because the object itself is nothing but the totality of the notion'? ‡

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* *Loc. cit.* p. 187.

† *Op. cit.* p. 232.

Hegel rejected the 'pre-established harmony,' rejected also the obviously untenable position of a complete parallelism between the order of ideas and the order of things which would imply that whatever thought crossed the mind must have an external fact corresponding with it. He held with all other thinkers that some ideas correspond with facts, others do not. But the grand desideratum, What shall be the criterion whereby to distinguish the true ideas from the false? Hegel failed to seize.

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* LEIBNITZ: *Système nouveau*, § 15. 'L'âme étant représentative de l'univers d'une manière très-exacte, quoique plus ou moins distincte, la suite des représentations que l'âme se produit répondra naturellement à la suite des changements de l'univers même.'

† LEIBNITZ: *Lettre à Basnage*: *Opera Philos.* ed. ERDMANN, p. 151.

‡ HEGEL: *Logik*, iii. 271. 'Weil das Objeckt selbst nichts als die Totalität des Begriffes ist.'

This necessarily imperfect account of a vast system of thought must here cease. It has touched only on a few cardinal points, but these will, I hope, suffice both to assign to the system its historical significance, and serve as an introduction to those who may desire a near acquaintance with Hegel. False, and pernicious because false, as the system seems to me, I cordially join in the admiration expressed by disciples when they speak of its comprehensive ingenuity and imposing coherence. Hegel was assuredly one of the greatest of metaphysical thinkers; and will probably for very many years be an object of curious study. That he has made an epoch, I cannot admit; that he has made any one valuable contribution to philosophical evolution—discovered one law or point of view by which all succeeding speculation must be determined, is, I think, extremely doubtful. But he has cleared up many obscurities, systematized metaphysical thought in a masterly manner, and thus will for some time be a quarry for speculative thinkers.*

* Of the works on Hegel the following deserve mention. WILM: *Histoire de la Philosophie allemande*, 4 vols. Paris, 1846-9, a careful and detailed analysis of the chief works; it seems very accurate as far as my superficial examination of it allows me to judge. OTT: *Hegel et la Philosophie allemande*, Paris, 1844, useful, but inferior to WILM, and often misrepresenting positions. VERA: *Introduction à la Philosophie de Hegel*; the same writer has translated the *Logique* with a commentary, the *Philosophie de la Nature*, and the *Philosophie de l'Esprit.* I have seen none of his labours, but hear them spoken of approvingly. For an Italian to translate Hegel into French, implies a marvellous flexibility of mind. STIRLING: *The Secret of Hegel*, 2 vols. 1865; this in every sense remarkable work, eloquent, grimly-humorous, iconoclastic, chaotic,—contains a translation of several sections of the *Objective Logic* with a commentary; and is, except the little tractate published by SLOMAN and WALLON in 1855 under the title of *The Subjective Logic of Hegel*, the only translation into English of the purely speculative treatises; while Mr. SIBREE's translation of the *Philosophy of History*, 1857 (*Bohn's philosophical Library*) is the only translation of a complete work by Hegel. In the *Oxford Essays*, 1855, Mr. SANDARS has given an account of Hegel's *Philosophy of Right.* In the *Fortnightly Review*, September, 1870, Mr. HENDERSON has treated of *Hegel as a*

politician. All the German Histories of Philosophy published of late years, of course treat of Hegel. MICHELET: *Geschichte der letzten Systeme der Philosophie in Deutschland,* 2 vols. 1837, is the work of a disciple. SCHWEGLER: *Handbook of the History of Philosophy.* Translated and annotated by J. H. STIRLING, 1867, an excellent handbook, brief yet full. UEBERWEG: *Grundriss der Geschichte der Philosophie,* 3 vols. Berlin, 1868, a masterly work by an acute thinker. REICHLIN-MELDEGG: *Einleitung in die Philosophie,* prefixed to his *System der Logik,* Wien, 1870.

Very valuable for students who can think out the conclusions without the aid of illustrations, is FRANZ and HILLERT: *Hegel's Philosophie in wörtlichen Auszügen,* Berlin 1843. It is a systematic abridgment of the works in Hegel's own words; and is not only valuable as a brief exposition of the system, but useful as a companion to the works.

ELEVENTH EPOCH.

Foundation of the Positive Philosophy.

CHAPTER I.

AUGUSTE COMTE.[*]

§ 1. HIS LIFE.

AUGUSTE COMTE was born at Montpellier on the 19th of January, 1798, in a modest house still to be seen facing the church of St. Eulalie. His father was treasurer of taxes for the department of Hérault. Both father and mother were strict Catholics and ardent royalists; but any influence they may have exercised over the direction of their son's thoughts was considerably neutralised by his own insurgent disposition on the one hand, and by his early education on the other. He was not docile to authority; though in after life he strenuously preached the virtue of docility. At the age of nine he became a boarder in the Montpellier Lycée; and there quickly distinguished himself by his ardour in study and by his resistance to discipline. Small and delicate in frame, loved by his comrades although he seldom joined in their sports, full of veneration for his professors, he was intractable, tiresome, and argumentative with his masters; those who could teach him found him docile;

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[*] The sources of this biographical sketch have been LITTRÉ: *Auguste Comte et la Philosophie positive*, 1863; ROBINET: *Notice sur l'Œuvre et sur la Vie d'Auguste Comte*, 1860; *Lettres d'Auguste Comte à M. Valat*, 1870; and personal knowledge.

those who had to restrain him found him rebellious. His professors praised, his masters punished him.

At the age of twelve he had learned all that the Lycée prescribed in the way of instruction, and the Director begged that he might be permitted to begin mathematics. Consent was given; and the result may be told in one significant sentence: in four years he had gained a first place at the École Polytechnique, although the rules of that institution did not then allow of his admission, because he was still under age. He had to wait a whole year before the doors were open to him; and in that year he displayed his acquirements by taking the place of his old professor (who was in failing health), and giving a course of mathematics to his former comrades, and some of his former masters.

At the age of seventeen he was admitted to the École Polytechnique, and there he was brought in contact with republican sentiments and scientific tendencies eminently suited to his rebellious and enquiring disposition. By the time he was fourteen he is supposed to have entirely disengaged himself from all royalist and all theological opinions; and he was occupied with the writings which in the eighteenth century discussed the fundamental axioms of social, ethical, and religious systems. He began seriously to meditate on the revolutions of modern history. His comrades respected and admired him. His professors recognised his eminent capacity. A brilliant career seemed certain, when it was arrested by a characteristic action of his own. One of the masters had insulted the younger students by his manners; the elder students took up the case, and after mature deliberation decided that the master was unworthy of continuing in his office. They drew up the following notification:—'Monsieur, Quoiqu'il nous soit pénible de prendre une telle mesure envers un ancien élève de l'école, nous vous enjoignons de n'y plus remettre les pieds.' This notification, drawn up by Comte, had his signature at the head of the list. The result was his expulsion. His official career was at an end. He was forced to return home; and remained there some time under the surveillance of the police.

We do not learn, but we may imagine, what was his reception at home, and of what nature were the debates as to his possible future. He remained some months at Montpellier, pursuing his studies with passionate devotion, and attending the various lectures at the Faculty. But this could not last. Paris allured him. In vain were the remonstrances and threats of his troubled parents; in vain their refusal to give him a penny if he quitted his native city without an assured position; the desire for freedom and the manifold attractions of the great intellectual centre were all powerful; and he found himself lonely in the crowded capital, ready to begin that eternal struggle in which year after year so many noble intellects equipped with nothing but a little knowledge and an immense ambition, fight for bread and distinction, are wounded and worsted, are wounded and conquer. A greater intellect moved by a loftier ambition has rarely fought that noble fight.

He supplied his very modest wants by giving private lessons in mathematics. Two illustrious men of science befriended him—Poinsot, who had been his professor at the École Polytechnique, and knew his mathematical power; De Blainville, who early recognised his philosophical calibre. By their aid a few pupils were obtained; one of them was the Prince de Carignan.* The bread was scanty, but he wanted little more than bread. He was not one of those who founder on the sunken rocks of Parisian life.†

A brief experience of a less independent position seems to have sufficed. He became private secretary to Casimir Périer; but quickly found that the paid servant was expected to be a blind admirer. Called upon to make some comments on the public labours of his master, 'elles ne furent pas goûtées;' and after a trial of three weeks the connection ceased. From Casimir Périer he passed over to the celebrated St.-Simon. This was in 1818. The young philosopher hoped that he might live in harmony with a philosopher; and for some years he did so. I cannot ascertain precisely the footing on which they stood together. M. Littré says that Comte was first secretary, then pupil, then collaborateur and friend. Dr. Robinet says that the secretaryship was practically an honorary one, for although three hundred francs a month were promised, only the first quarter's salary was ever paid.* Whatever the nature of the relation, it subsisted for six years, beginning with great enthusiasm on Comte's part, continuing for some time with affectionate veneration, and ending in a violent rupture which was the culmination of a growing dissidence in opinion.

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* 'De cette manière je me fais une rente d'environ 200 francs par mois, et par conséquent tu vois que je puis subsister sans être obligé de demander rien à mes parents.' *Lettres à Vallat*, p. 14.

† 'Je cherche à imiter le Socrate moderne (Franklin), non par ses talents mais par ses mœurs. Tu sais qu'à vingt-cinq ans il forma le projet de devenir parfaitement sage, et qu'il l'exécuta: moi, j'ai osé entreprendre la même chose, et je n'ai pas vingt ans.' *Ibid.* p. 19.

There have been angry accusations and angry recriminations from the disciples of St.-Simon and the disciples of Comte which render the task of an impartial biographer somewhat difficult. But whatever may have been the personal influence of St.-Simon, for good or evil, on the direction of Comte's aims, a superficial acquaintance with the Positive Philosophy will detect its essential independence of, and divergence from, St.-Simonianism. When, therefore, writers sarcastically or indignantly assert that Comte 'borrowed St.-Simon's ideas,' they disclose a complete misapprehension of all that characterises the Positive Philosophy. On the other hand it is unnecessary to assail St.-Simon, and accuse him of being an ignorant charlatan, in order to prove what his own language and the express declaration of his editor unequivocally establish, namely, that he not only disapproved, he failed even to understand, the doctrines of his young collaborateur.

As a point in the history of philosophical evolution it is clear that Comte does not proceed from St.-Simon, but from the eighteenth century: he resumed its twofold movement towards destruction and reconstruction in one grand synthesis by means of a thorough application* of the Methods of Science. Nevertheless, as a detail in the biographical evolution of Comte's own mind, it is, I think, undeniable that the influence of St.-Simon was decisive. By which I mean that through personal contact with this reformer his mind received the stimulus, if not the bias, which at that peculiar stage of his development was a determining one. At the age of twenty, familiar with all the inorganic sciences (Biology he had not then studied, and Sociology had not been conceived), well read in history, fervent in republicanism, and ambitious of mastering the great laws of social existence, this inheritor of the eighteenth century spirit, regarding Philosophy and Science as instruments for the dissolution of theological superstitions and feudal inequalities, came into affectionate and reverential contact with one whom some regard as a turbulent charlatan, and others as a prophetic thinker, but whom all must admit to have been impressed with the urgent need and possibility of replacing the critical and destructive tendency by a positive and constructive tendency; and the immediate consequence of this contact was, that Comte learned to look upon the revolutionary work as completed, and saw that the effort of the nineteenth century must be towards the reconstruction of society upon a new basis. The old faith was destroyed, a new faith was indispensable.

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* See *Lettres à Valat*, p. 36.

Probably most readers will agree with M. Littré, that so potent an intellect as Comte's might easily have passed from the revolutionary to the constructive attitude without any impulse from one so manifestly his inferior as St.-

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* This is confirmed by his letter to VALAT written after his quarrel with ST.-SIMON, in which he speaks of a new work written away from the influence of that former master, 'influence du reste qui a puissamment servi à mon éducation philosophique' (p. 115). And compare p. 119: 'Je dois certainement beaucoup intellectuellement à St.-Simon, c'est-à-dire qu'il a puissamment contribué à me lancer dans la direction philosophique que je me suis créée aujourd'hui.'

Simon: but 'what might have been' is an idle hypothesis when we know what was; and in Biography, as elsewhere, we should guard against the tendency to substitute a possible evolution for an actual evolution. The simple biographical fact is, that in his youth Comte passed from the negative to the positive attitude while under the influence of a teacher whose special aim was constructive. He called himself a disciple of St.-Simon; and it is not clear what he could have learned from such a master, except the necessity of a constructive attitude.

An attitude, however, is not a doctrine: an aim is not a philosophy. The impulsion may have come from St.-Simon; the doctrine assuredly came from Comte, and from him only. It was probably owing to his keen perception of the irreconcilability of his ideas with the ideas of St.-Simon, and the pardonable exasperation he felt at ungenerous accusations, which made him in his later years speak of his old master with excessive bitterness. His tone was that of a man who feels himself to have been deeply injured. So far from acknowledging any intellectual debt, he, who was nobly scrupulous in acknowledgment of all such obligations, however trifling, always affirmed that St.-Simon's influence had been a serious retardation of his development. What the truth may be cannot now be ascertained. It is certain that his development was surprisingly rapid, and that four years after his first meeting with St.-Simon, namely in 1822, he laid the solid basis of the new philosophy, which he called 'positive,' because it was the generalisation of the method which each positive science had employed in particular. Like Bacon, he schemed in his youth what a laborious life was devoted to work out.

St.-Simon had vast aspirations, but he misconceived the fundamental conditions of social reorganisation. He was, moreover, altogether unprepared for a system based upon positive science, the more so because he was unacquainted with the methods of science; and accordingly, when Comte, in 1822, having discovered the laws of social evolution, drew up his memorable *Plan des Travaux nécessaires pour réorganiser la Société,* it must have dawned upon St.-Simon that his young assistant had become his rival and superior. He published the essay, but even in publishing it disclaimed agreement in its peculiar views. Others thought more highly of it; among these were Humboldt and Guizot. In writing to a friend, the young philosopher could say, 'J'ai été agréablement affecté (je ne dis pas surpris) de l'effet que ce travail a produit sur M. Guizot; il m'en a témoigné par écrit une profonde et sincère satisfaction, et depuis j'ai pu voir par sa conversation que ces idées agissent sur lui.' He also mentions its effect on Flourens, adding, 'Je dois avoir avec lui un entretien important sur l'idée fondamentale de mon travail, l'application de la méthode positive à la science sociale.'

The open rupture with St.-Simon took place in 1824. The next year may be considered the year when the Positive Philosophy was constituted; for, as M. Littré reminds us, the Essay of 1822, republished in 1824, only sets forth the laws of social evolution, but does not give even an outline of the Positive Philosophy, which is for the first time expressly announced in the *Considérations philosophiques sur les Sciences et les Savants* * (published in the *Producteur* in 1825). In the two pregnant essays which thus form, as it were, the inaugural thesis of the young philosopher, it is shown (1) that all phenomena, even those of politics, are subject to invariable laws; (2) that the human mind passes from initial theological conceptions to final positive conceptions through the transition of metaphysical conceptions; (3) that human activity, in like manner, passes through three phases, from the conquering military régime to the pacific industrial régime, through the transitional state of a defensive military régime; (4) that everywhere, and at all times, the state of opinions and manners determines the institutions, and that the nature of the general beliefs determines a corresponding political régime; (5) that philosophy (or general beliefs) in passing from the theological to the positive stage must bring about the substitution of the industrial for the military régime; and finally, that the spiritual reorganisation, which is the necessary condition of all social reorganisation, must repose upon the authority of demonstration, it must be based upon science, with a priesthood properly constituted out of the regenerated scientific classes. In other words, the spiritual authority must issue from a philosophy which can be demonstrated, not from a philosophy which is imagined.

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* This essay, with others, will be found appended to the fourth volume of the *Système de Politique positive*: they form an excellent introduction to the study of Positivism.

The year 1825 is memorable on other grounds; it is the date of his marriage with Caroline Massin, bookseller, then (as I infer from a phrase in one of his letters to me) in her twenty-fourth year.* There is no graver event in a man's life than marriage. It may prove an inestimable blessing, the subtle influences of which will permeate every hour of the day, strengthen every fibre of his moral being, and by its satisfying repose to the affections, give his intellect a calmer and more continuous sweep. It may also prove a desolating evil, numbing the sympathies, irritating and scattering the intellectual energies, distorting the life. In Comte's case the marriage was unhappy.† In spite of mutual admiration there was some essential cause of disunion, which led to much unhappiness and a final separation. Into the very delicate question of culpability I do not feel inclined to enter. The relations of man and wife are too complex and too obscure for a bystander to appreciate, even when he has personal knowledge to aid him. I have no knowledge of Comte in his domestic relations; and MM. Robinet and Littré are so transparently in the position of partisans, one vehemently reviling Madame Comte, the other artfully pleading her cause, that little reliance should be placed on either. M. Littré is more measured in his judgments than Dr. Robinet, whose imputations cannot be sustained in presence of the documentary evidence of letters from De Blainville, Comte, and Madame Comte; but M. Littré, who has long been the intimate friend of Madame Comte, suppresses important facts, and uses others with insidious effect. In presence of such *ex-parte* versions we shall do well entirely to suspend judgment.

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* From his letter to VALAT it appears that she was only two-and-twenty, and had no other dowry except her 'bon cœur, ses grâces, son esprit d'une trempe peu commune, son aimabilité, son heureux caractère et ses bonnes habitudes,' p. 162.

† In less than a year after their marriage we find him writing thus: 'Tu me crois heureux; je le suis en effet, sous certains rapports, sous tous ceux qui dépendent essentiellement de mon organisation et de mes antécédents; mais sous d'autres *je ne souhaite pas à mon plus cruel ennemi un pareil bonheur.*' From a passage at p. 178, we may divine that Madame Comte was not sufficiently in love with her husband to suppress in its birth 'all vain desire of dominion.' Temper, here as in so many other cases, was the domestic fiend.

Enough for us here to know that Comte was initiated into domestic life at a time when there seemed very little prospect of his being able to earn more than a precarious subsistence. His family at first opposed the match, but finally gave a reluctant consent: though, to their grief, the religious ceremony was resolutely declined, and a civil marriage was all that Comte would accept. We shall hear more of this presently. Meanwhile we must think of the young couple as dependent entirely on the proceeds of lessons in mathematics. At the time of their marriage, Comte had but one pupil: that pupil was the 'Bayard of our day,' as his admirers style General Lamoricière. A modest lodging was furnished in the Rue de l'Oratoire. Here M. de Narbonne proposed to place his son as boarder and pupil. Other aristocratic families would, it was hoped, follow the example. To receive these pupils a more dignified apartment was taken in the Rue de l'Arcade, at the corner of the Rue St.-Lazare; and fresh furniture had to be bought. Their small stock of ready money was thus invested, but the pupils never came, and the apartment was a burden. In a few months the solitary boarder was sent back, and the young couple had to migrate to more modest lodgings in the Rue Montmartre (No. 13). Here Comte, although unwilling to divert his attention from the working out of the great scheme which he was then meditating, was persuaded to earn a little money by publishing an occasional essay in the *Producteur.* To this we owe the *Considérations philosophiques sur les Sciences et les Savants,* and the *Considérations sur le Nouveau Pouvoir spirituel.*

By the month of April, 1826, the system was sufficiently matured in his mind for a dogmatic exposition, which he announced in a course of seventy-two lectures to be delivered in his private rooms. There is something imposing in the magnitude of the attempt. One hears with surprise of a young and obscure thinker proposing to expound the philosophy of all the sciences, aiming at the reconstruction of a Spiritual Power, and calling upon his auditors for a year's severe attention to his scheme. One is still more surprised to hear the names of the auditors who were prepared to give this attention: Humboldt, Poinsot, De Blainville, Montebello, Carnot, d'Eichthal, Cerclet, Allier, and Mongéry. A scheme so gigantic might, indeed, have originated in a colossal vanity unimpeded in its pretensions by any definite knowledge of what the scheme implied; for the ignorant are often seduced by their ignorance into pretensions which a little knowledge would repress. It is as easy to write a check for ten millions as for ten pounds—when you have nothing at your banker's. But the presence of an audience such as I have named, and in such a place, proves that the pretensions were recognised by competent judges, and that the lecturer had inspired men of position with the conviction that he had something important to say.

It will be readily understood, by anyone acquainted with the intense cerebral excitement which attends the elaboration of great conceptions in their systematic co-ordination, that the strain on Comte's mind, amid various vexations, and particularly in the agitation of vehement personal quarrels, proved too much for him. After the delivery of three or four lectures, an attack of insanity abruptly closed the course. For some weeks previously he had displayed an irritability and violence of temper which alarmed his wife.

She, not unnaturally, attributed to malignity what was due to disease. On Friday, April the 24th, he went out and did not return home. On Monday a letter came, dated from St. Denis, whither his wife hastened, but found him no longer there. Remembering that he was very fond of Montmorency, she went there on the chance of finding him; and found him in a pitiable condition. A physician was sent for, who confessed the case to be alarming, but dared not bleed the agitated patient.

The excitement subsided, and he expressed a wish to go out for a walk. She imprudently consented, and accompanied him. As they came to the edge of the lake of Enghien, he suddenly declared that although he could not swim he should not be drowned if he walked into the lake; and he began to drag his wife with him. She was young and strong; struggled, caught hold of a tree, and saved them both.

But now came the difficulty of getting him back to the inn. His excitement rapidly increased. The peasants refused all offers tempting them to act as guardians while his wife hurried to Paris to seek the assistance of De Blainville; and she was forced to leave him under the charge of two gendarmes. She returned from Paris to find him in a worse condition. In the morning De Blainville arrived followed by M. Cerclet. They contrived by stratagem to get him to Esquirol's establishment for the insane; and there his exaltation was so great, that it was regarded by Esquirol as a favourable prognostic of an early recovery. Unhappily the recovery was slow, and would probably have been impossible had he not quitted the madhouse, with its incessant irritations, for the soothing influences of domestic quiet. On hearing the melancholy news, Comte's mother at once came to Paris to attend on him; and she remained there till he quitted the Asylum. De Blainville, after seeing summer and autumn pass away without sensible improvement, justly concluded that hatred of his keepers and the system of treatment perpetuated the excitement. Comte's father hereupon proposed that he should be removed to

Montpellier. But the wife wished to have her husband under her care, and her plan was adopted.

A grotesque and lugubrious farce was played on the day of his quitting the establishment. I have already mentioned the pain and indignation of his family at his refusal to give his marriage the religious sanction of a Church ceremony; and this refusal was now regarded by his parents as the origin of the calamity which had fallen on him. The confidence with which people see the 'finger of God' in human afflictions, and see their own anger confirmed by his 'judgments,' is too constantly exemplified for us to think harshly of the mistaken parents. But I cannot without pain hear of a man like Lamennais being mixed up with what followed, namely, the attempt to make peace with offended Heaven by inducing the insane heretic to submit himself to the dictates of the Church he detested, and ask for a religious ceremony to sanction his marriage. By what arts the consent was gained, is not said; but in a lonely chamber of Esquirol's madhouse this gloomy farce was played. The officiating priest was deficient in tact, and instead of shortening the ceremony, lengthened it by a prolix discourse which excited Comte; and the shocking spectacle was presented of a priest pouring forth pious exhortations, extremely unsuited to the mental condition of the maniac, who kept up a running commentary of anti-religious incoherencies! The state of his mind was exhibited when he came to affix his signature, —after his own name he added Brutus Bonaparte. But the ceremony was performed; the Church was satisfied; the tender consciences were at peace.

He left the establishment for ever. His nurses were now his mother and his wife. Iron bars were placed before the windows of his lodging, and Esquirol sent a keeper to help and protect them. But at the end of a week it was found necessary to do away with these precautions, which made the unhappy man still imagine himself in the establishment he hated. From that moment his recovery began. In three weeks' time he was left alone with his wife. His violence at first caused serious anxiety. Twice a day, at meals, he would try to plant his knife in the table, in imitation, he said, of Sir Walter Scott's highlander; and he would call for a succulent pig, in imitation of Homeric heroes. More than once he threw his knife at Madame Comte—not, as she believes with any intention of injuring her, but merely to frighten her into compliance with his wishes.

At the end of six weeks all immediate danger was over. A new danger emerged in the profound melancholy which gradually overclouded him, as with returning health there came upon him the conviction that he could no longer live that life of intellect which had once been his. Life could in future be nothing but a weariness, now that his powers were gone. The idea of suicide arose. One day, during his wife's absence, he slipped out, hurried to the Seine, and threw himself into it from the bridge. A soldier plunged in and saved him. The shock seems to have roused his energies; perhaps by determining a different impulse to his circulation. He expressed great regret for his attempt, and the grief he had thereby caused his wife. From this time there was no relapse. In the month of July he was well enough to visit his parents at Montpellier.*

It is not without a purpose that I have told this story of the severe cerebral attack in its painful details. The fact that he had been insane was openly avowed by himself, in anticipation of the ignoble pretext which he foresaw that it might furnish to his adversaries, who would more easily dismiss his philosophical ideas as the reveries of a madman than point out incoherencies and refute arguments. We are so ready to see the love of singularity, the distorted conceptions of eccentricity, or the illusions of a 'heat-oppressed brain,' in any departure from our own ways of thought, that when a man comes before us with opinions we do not understand, or understanding do not like, and that man is known to have been actually insane at one time, the temptation to charge his opinions on his insanity is very strong indeed. But although Comte was really out of his mind for one brief period, he was perfectly sane and sound when he first conceived, and when he finally executed, the scheme of his philosophy. Had the work been elaborated in a madhouse, or published while the author was insane, there would be an excuse for dismissing it unexamined; in such a case, however, examination would have disclosed something like a miracle which would have revolutionised all our ideas about insanity. Everyone must see that a body of doctrine so compact and organically related in its parts, could only have been wrought out in the plenitude of mental power. Call that doctrine mischievous, erroneous—what you please—only not incoherent. The intense concentration it demanded may have been the predisposing cause of the insanity, but the insanity had nothing to do with the production of the philosophy. Nor will anyone who is even superficially acquainted with the phenomena of mental disease, and who understands that all disease whatever is only a disturbance of equilibrium in the functions, suppose that when the disease has passed and the equilibrium is restored, the functions will not resume their normal activity, the insane man becoming perfectly sane, and capable of as accurately co-ordinating ideas as before. The fevered pulse becomes normal in its beats, the inflamed mucous membrane becomes normal in its power of secretion, and the over-stimulated brain becomes normal in its action, when once the disturbing causes are removed.

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* I have followed M. Littré in this narrative of the attack, because it is confirmed, to a great extent, by documentary evidence, though of course the story proceeds from Madame Comte.

There is, therefore, nothing remarkable in the fact that Lucretius and Cowper wrote their immortal poems during lucid intervals of frequent cerebral attacks. The philosophy of Lucretius has indeed been often affiliated on his insanity; but the sweet piety, the delicate humour, and the sustained excellence of Cowper, have not been thus branded; and they show that the mind *is* lucid in its lucid intervals. The list of illustrious madmen is a long one. Lucretius, Mahomet, Loyola, Peter the Great, Haller, Newton, Tasso, Swift, Cowper, Donizetti, spontaneously occur as the names of men whose occasional eclipse by no means darkens the splendour of their achievements. To these we must add the name of Auguste Comte, assured that if Newton once suffered a cerebral attack without thereby forfeiting our veneration for the *Principia* and the *Optics*, Comte may have likewise suffered without forfeiting his claims on our veneration for the *Philosophie positive.* But the best answer to this ignoble insinuation is the works themselves. If they are the products of madness, one could wish that madness were occasionally epidemic.*

I return to the narrative of his life. In 1828 he recommenced that oral exposition of his system which we have seen so cruelly interrupted. This time it was in his lodgings, Rue Saint-Jacques, No. 159. The great geometrician Fourier, and the celebrated physician Broussais, with De Blainville, Poinsot, and Mongéry, were among the small audience. He completed the course, and also gave a brief public exposition of his historical views at the Athénée. In 1830 he published the first volume of his Course; but the second volume, owing to the commercial crisis, did not appear till 1835; the sixth and last in 1842. I should add that in 1830 he began to give the gratuitous course of public lectures on Astronomy which was repeated for seven years, and afterwards (1844) published under the title of *Traité philosophique d'Astronomie populaire.*

These twelve years (1830–42), embracing the publication of the *Cours de Philosophie positive*, form what M. Littré justly calls 'the great epoch' in his life: 'Un labeur infini l'attendait; il se soumit sans réserve à cet infini labeur.

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* Let us hear him on this point:—'Après que la médecine m'eut enfin heureusement déclaré incurable, la puissance intrinsèque de mon organisation, assistée d'affectueux soins domestiques, triompha naturellement, en quelques semaines, au commencement de l'hiver suivant, de la maladie, et surtout des remèdes. Ce succès essentiellement spontané se trouvait, dix-huit mois après, tellement consolidé que, en août 1828, appréciant dans un journal le célèbre ouvrage de Broussais sur L'Irritation et la Folie, j'utilisais déjà philosophiquement les lumières personnelles que cette triste expérience venait de me procurer si chèrement envers le grand sujet.'

Douze ans se passèrent pendant lesquels il ferma courageusement sa vie à tout ce qui aurait pu le distraire. Jamais le besoin d'une publicité prématurée ne fit invasion dans son âme. . . . Sévère, persévérant, sourd aux bruits du dehors, il concentra sur son œuvre tout ce qu'il avait de méditation. Dans l'histoire des hommes voués aux grandes pensées, je ne connais rien de plus beau que ces douze années.' It would be well that we should bear this in mind. Although the world is called upon to judge results, not efforts—to accept or reject works on their own pretensions, and not on any pretensions claimed for the disinterestedness and labour of the worker—it is but just that, in speaking of the worker, we should remember his claims. Whether it is a system or a sonnet, we agree with the Misanthrope of Molière—

> 'Monsieur, le temps ne fait rien à l'affaire ;'

but the serious worker is regarded with very different feelings from those which are excited by the vain and presumptuous sciolist. Reject the Positive Philosophy if your mind refuses to accept it, but speak of Comte as one who gave a life to its elaboration ; as one who believing that he was commissioned to impart a new faith, accepted the burden with a severe courage, and thought and toiled, relinquishing all other aims, steeling himself against all other seductions, and with a noble disinterestedness devoting himself to the task which he well knew was certain to bring obloquy on him while living, to be followed by an immortal fame.

Shortly after 1830 he refused to join the National Guard. He was cited before the municipality, and was condemned to an imprisonment of three days. He thus proclaimed his reasons :—'The law declares that the National Guard is instituted to defend the government which France has given herself. If it were simply a question of maintaining order I should not refuse to bear my part; but I refuse to share in political struggles. I shall never attack the government by force. But, being a republican in mind and heart, I cannot swear to defend, at the peril of my life and that of others, a government which I should attack were I a man of action.' Such language as this would have led to a criminal indictment had not the authorities dreaded the publicity of such a defence. As it was, he remained unmolested.

In 1833 he obtained an office in the École Polytechnique, which with another that soon came to him, and a mathematical class in a private educational establishment, brought ease into his domestic circumstances, and enabled him to dispense with private pupils. From this time and for some years he enjoyed an income of 10,000 francs. Hitherto his sole relaxations had been long walks, and what he called his *flâneries philosophiques*. Now he was enabled to indulge his newly awakened passion for music, and every season had his stall at the Italian Opera.* Although without musical culture, he was exquisitely sensitive to music; had a fine voice, and sang certain songs with great effect, particularly *La Marseillaise*, which he gave with vibrating revolutionary fervour.

He read absolutely nothing on Philosophy or Science: he abstained on system. In his early years he had read immensely, and his memory was of extraordinary tenacity. English, Italian, and Spanish he taught himself simply by taking a book and a dictionary of each language. Gifted with such a memory, his neglect of books was perhaps a greater advantage to the integrity of his philosophising than it would be in most cases. All his knowledge was organised; whatever he had once read was always available.

M. Littré describes his method of composition, which is truly remarkable. 'He meditated the subject without writing a word. From the general conception he passed to the great divisions, and from those to the details. When this elaboration, first of the whole and then of the parts, was finished, he considered that his volume was completed. And this was true, for on sitting down to write he recovered without loss every one of the ideas which formed the tissue of his work, and recovered them in their order and connection, although not a word had been committed to paper. In this way he composed the course of lectures which embraced the whole Positive Philosophy, and the catastrophe which followed (in 1826) proves that the method was as dangerous as it was puissant.' When once he began to write he was hurried along by the impetuous current of his thoughts ; and the dates which he has given of the composition of various parts of his writings prove the almost incredible rapidity with which he wrote. The sheets were sent to press as fast as they were written; so that the printing of each volume was completed almost as soon as he laid down the pen.

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* 'Je suis fort heureux,' he writes to VALAT, 'que ce goût se soit enfin développé chez moi, quoiqu'un peu tard, d'une manière aussi franche et aussi vive, qui m'inspire à cet égard toute l'ardeur d'un jeune novice. . . . Du reste ce goût esthétique n'est pas borné à la musique, quoique actuellement dominante; il s'étend aussi à la peinture, et surtout à la poésie, pour laquelle tu connais mon ancienne prédilection, qui, après m'avoir momentanément quitté, m'est depuis longtemps pleinement revenue.'

The last of his private pupils, whose name has not transpired, has given an interesting glimpse of his illustrious teacher, in a paper which appeared in *Chambers's Journal* (June 19, 1858). After narrating how he found himself in this position, he adds :—'Daily as the clock struck eight on the *horloge* of the Luxembourg, while the ringing hammer on the bell was yet audible, the room of my door opened, and there entered a man, short, rather stout, almost what one might call sleek, freshly shaven, without vestige of whisker or moustache. He was invariably dressed in a suit of the most spotless black, as if going to a dinner party; his white neckcloth was fresh from the laundress's hands, and his hat shining like a racer's coat. He advanced to the arm-chair prepared for him in the centre of the writing-table, laid his hat on the left-hand corner, his snuff-box was deposited on the same side beside the quire of paper placed in readiness for his use, and dipping the pen twice into the ink-bottle, then bringing it to within an inch of his nose, to make sure it was properly filled, he broke silence: "We have said that the chord A B," &c. For three quarters of an hour he continued his demonstration, making short notes as he went on, to guide the listener in repeating the problem alone; then, taking up another *cahier* which lay beside him, he went over the written repetition of the former lesson. He explained, corrected, or commented till the clock struck nine; then, with the little finger of the right hand brushing from his coat and waistcoat the shower of superfluous snuff which had fallen on them, he pocketed his snuff-box, and, resuming his hat, he as silently as when he came in made his exit by the door which I rushed to open for him. This man of few words was the Aristotle or Bacon of the nineteenth century.

'Thus for a year I daily sat a listener, not always attentive, and to the last but dimly conscious of the value of lessons which I can never forget in their higher meaning, though the angles and curves which they explained have long since become to me more meaningless than hieroglyphics.

'One would think that such a teacher, gliding in and out like a piece of clock-work, without an interchange of any of the gentle courtesies of life, would raise only a repulsive feeling in his pupil. It was in vain I tried to break through the coldness of our relations, to establish that little preliminary gossip in which I have found some teachers too ready to employ all the time of their lesson; he seemed to say that he had nerved himself to a disagreeable duty, and that nothing should turn him from it. Only twice did I even succeed in gaining proof that he had something mortal in his composition. I had been six weeks under his tuition, and still persisted, with more, perhaps, of malice than of ignorance, in using the most abominably ungrammatical French in my written repetitions of his lectures. One morning he lost patience at some solecism more excruciating than usual; and laying down his pen, he turned to me, and said: "Why do you persevere in writing such barbarisms?" "You know I am a foreigner," said I: "how should I do better?" "You can at least do better than this: write as you speak;" and he resumed his pen, correcting every fault of language. From that day, there were few grammatical blunders in my papers. Once again, and this time less wilfully, I encountered the same mild anger. I was at the time studying very hard, generally thirteen hours a day of book-work—a folly bitterly expiated and repented since—and I was seldom in bed till after midnight. One black wintry morning, after harder work than usual, I nodded over the lecture. With no straining of the ears, could I drink in the sense; with no forcing of the eyelids, keep them open. I dared not rise and take a few turns in the room, for this would have been a violation of our habits. So I sat till the humming of the voice, and the scraping of the pen, acted like a lullaby, and I was already three parts asleep, when suddenly a change of tone aroused me, and the words "But you sleep," recalled me to myself, only to see my tutor stalking out of the room, while I vainly tried to catch and appease him. The next day, he resumed the lesson where he had left off on the one previous to my nap, but not a word of reproach was uttered, or of apology allowed, by the insulted sage.

'From that day, I began to love him. Cold or abstracted as he seemed, the intellectual giant henceforth won almost imperceptibly on the youth. I could not feel, much less measure his greatness, but I acquired an interest in the dry science he taught me; and had I continued under his charge, I might have become a mathematician. I had been taught to fear, not to revere my masters; if I had a liking for any one, it had been in proportion to his laxness: and I now found myself half unconsciously, and quite unaccountably, gliding into a sort of affection for the most unapproachable, the most uncongenial of them all. I was then the most unreasonable of boy-mortals. I cannot, therefore, suppose that this feeling was due to the sway of pure reason over my mind; I can only think that it arose from an instinctive perception of the smothered kindliness which entered so largely into his composition.

'I returned to England to "keep halls," and devote myself to a new range of studies--stigmatised, I believe, by my masters and pastors as pure idleness, because not set down in their books; and it was two years before I was again in Paris. By that time I had become acquainted with what was published of the *Philosophie positive.* From its pages I had learned that my old tutor was a great man, though hardly yet a celebrated one. I had learned to contrast his earnestness with the *laissez-faire* of others; and a visit to him was one of the first pleasures which I promised myself in the capital most fertile in pleasure to youthful visitors. Mindful of the showers of snuff which had too often attacked my sternutatory muscles, I carried him a Cumnock snuff-box, with one of our Ayrshire pebbles in the lid, and was delighted to find it graciously accepted. He put it at once into a drawer of his writing-table, and then told me that he had given up the use of snuff. He said that he had withdrawn entirely from the world, to devote himself without distraction to the politics of his philosophy—that he no longer even read the newspapers, and had weaned himself from every superfluity.

'It was not till 1851 that I again saw him. He was then the acknowledged chief of a school, and renowned, if not admired, among all thinkers. I had some little trouble in finding his abode, and it was with a beating heart that I pulled the bell-string. An old gentleman in a dressing-gown, with a black neckerchief strung round his throat, opened the door. I almost thought I had misunderstood the porter's directions. "Monsieur Comte?" I enquiringly said.

'"It is I, Sir," was the answer.

'The change in his appearance intimidated me, and I hesitatingly mentioned my name. At once he put out his hand, and drew me into his sitting-room. Here I was able to remark the wonderful change which had come over his expression since we had last met. He now reminded me of one of those mediæval pictures which represent St. Francis wedded to Poverty. There was a mildness in those attenuated features that might be called ideal rather than human; through the half-closed eyes there shone the very soul of him who had doubted whether he had anything more than intellect. "I did not recognise you," he said, opening a drawer; "but I think of you almost daily. See, I still have your box, and I keep my seals in it, so that I am often reminded of you." He spoke unreservedly of the honourable poverty to which the last revolution, in depriving him of his modest competence, had reduced him, and he told me how the generous sacrifices of some of his disciples had relieved him of the cares of material existence.

'He indulged me with a long conversation, every word of which filled me with fresh wonder. He was no longer the rigid thinker, regular and passionless as mechanism; he seemed to have renewed his youth, to have added something to his former self, but how or what, I could not at the time imagine. In terms unintelligible to me, he referred to relations which had given impulse to his affections; he spoke with enthusiasm of the Italian poets, and of Shakspeare and Milton, whose works he had learned to read in the original; and—O surprise!—taking from his chimney-piece a well-thumbed copy of the *Imitation*, he said: "I read some pages of this book every morning."

'I already had had cause to suspect that under that frigid mask which he wore in earlier years, an impulsive nature and warm affections were concealed; I had heard at the time that the little keepsake I had brought had pleased him so much, that in speaking of it a few days afterwards his eyes glistened; I understood, therefore, that far within him was a loving soul; and I now learned, from a book which he gave me, the story of how he had found and lost the counterpart, the other half, which he had so long sought. The history of the platonic love to which he owed the late development of his affections is a strange one, and the story of its heroine one of the saddest in the history of crime.'

To return: the year 1842 is doubly memorable: it saw the termination of his great work and of his conjugal life. I have already said that into the domestic question I cannot enter. Be the blame of the failure chiefly hers, or chiefly his, the failure sprang from conditions we cannot accurately appreciate. That the separation was her deed, and not his, seems indisputable ; and in one of his letters to Madame de Vaux he writes :—'An indispensable separation, all the more irrevocable on my side because I in no way provoked it, completely relieved me of an intolerable domestic oppression, now happily converted into a simple pecuniary charge which my character forbids my feeling in its true weight. In truth, the two first years of that new situation, during the interval between the close of my first great elaboration and the opening of the second, were passed in enjoyment of the negative happiness resulting from this unhoped-for calm succeeding the long and daily agitation.' It is clear from many indications that they quarrelled frequently and violently; their views of life were different, and probably the worldly views of the one were a continual exasperation to the other; but it is also clear that he did not regard her as having done anything to forfeit his respect and admiration; in one of his letters he lays the principal stress on the fact of her having never loved him. He continued for some years to correspond with her on affectionate terms.

With the publication of the *Philosophie positive* he assured his place among the great thinkers of all ages, but drew upon himself the bitter hatred of rivals and insulted professors, which hatred, being aided by the indignation of theologians, metaphysicians, and journalists, who were irritated at his dangerous doctrines and sweeping scorn, ended in driving him from his official position. He was turned adrift once more to seek a laborious existence as a teacher of mathematics. The story is told by him in the preface to the sixth volume of the *Philosophie positive*, and in fuller detail by M. Littré.* It need not be repeated here ; the sad result is enough. To mitigate the blow, three Englishmen—Mr. Grote, Mr. Raikes Currie, and Sir W. Molesworth—through the intervention of Mr. Stuart Mill, offered to replace the official salary for one year, understanding that at the end of the year Comte would be reinstated, or would have resolved on some other career. The year passed, and his re-election was again refused. At first this troubled him but little. He had learnt to regard the 'subsidy' of his admirers as his right. It was due from the rich to the philosopher; and the philosopher could more effectually use his powers if all material anxieties were taken from him. This, however, was by no means the light in which the case was seen in England. Mr. Grote sent an additional 600 francs, but a renewal of the subsidy was declined. Comte was exasperated. I remember hearing him speak of the refusal, as if some unworthy treachery had been practised on him. I tried to explain as delicately as I could what I conceived to be the point of view of his friends who had never thought of becoming his bankers; but he had so entirely wrought himself into the persuasion that the refusal was a moral dereliction, and that no excuse could be offered for men who had wealth withholding a slight portion of it from thinkers whose lives were of importance to the world, that I saw explanation was useless. He had a fixed idea on the subject; and it may be seen expressed in haughty terms in his letter to Mr. Mill.* If there is much to be said (and I think there is) in favour of his idea of the duty of the rich towards thinkers whose aims they approve, there is also not a little to be said on the other side, and not a little blame attributable to his manner of urging his claims. He chose to assume a 'haute magistrature morale' which others would not recognise. He professed to speak solely as a philosopher, but showed too much personal pre-occupation. It is sad to hear that the result of this was a coolness on the part of Mr. Mill, and the cessation of a correspondence which he had valued, and to which Comte himself attached great value (as appears in one of his letters to me, enquiring into the cause of the silence, and showing anxiety on the subject).

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* To which may now be added the *Lettres à Valat.*

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* And in a published work: 'Je somme tous les occidentaux capables de sentir, d'une manière quelconque, la vraie portée de mes travaux, de concourir loyalement, suivant leurs moyens respectifs, au digne protectorat institué pour moi. Si les positivistes incomplets persistaient à motiver leur *coupable indifférence* sur leurs divergences partielles envers l'ensemble de ma doctrine, je *dévoilerais aisément l'égoïsme mal caché* sous ce vain prétexte.'—*Système de Politique positive*, iii. Préface, p. xxv.

This idea of a subsidy replacing the 'infamous spoliation,' became, as I said, a fixed idea, and he now boldly relinquished all efforts at providing an income, and made a public appeal to his admirers for one. The appeal was responded to during the rest of his life.*

Meanwhile he was to learn the unspeakable influences of a deep affection. We have seen St.-Simon giving the bias to his intellect which determined the creation of the *Philosophie positive*; we have now to see the bias given to his thoughts by a passionate love, which carried him to sentimental and mystical conceptions little foreseen by his early adherents.

It was in the year 1845 that he first met Madame Clotilde de Vaux. There was a strange similarity in their widowed conditions. She was irrevocably separated from her husband by a crime which had condemned him to the galleys for life; yet although morally free, she was legally bound to the man whose disgrace overshadowed her. Comte also was irrevocably separated from his wife by her voluntary departure; and although morally free was legally bound. Marriage being thus unhappily impossible, they had only the imperfect, yet inestimable, consolation of a pure and passionate friendship. He was fond of applying to her the lines of his favourite Dante—

'Quella che imparadisa la mia mente
Ogni basso pensier dal cor m' avulse.'

Everyone who knew him during this brief period of happiness will recall the mystic enthusiasm with which he spoke of her, and the irrepressible overflowing of his emotion which led him to speak of her at all times and to all listeners. It was in the early days of this attachment that I first saw him; and in the course of our very first interview he spoke of her with an expansiveness which was very interesting. When I next saw him he was as expansive in his grief at her irreparable loss; and the tears rolled down his cheeks as he detailed her many perfections. His happiness had lasted but one year.

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* The circulars which he yearly sent forth are printed in the prefaces to his *Système de Politique positive.*

Her death made no change in his devotion. She underwent a transfiguration. Her subjective immortality became a real presence to his mystical affection. During life she had been a benign influence irradiating his moral nature, and for the first time giving satisfaction to the immense tenderness which slumbered there; she thus initiated him into those secrets of emotional life which were indispensable to his philosophy in its subsequent elaboration. Her death rather intensified than altered this influence, by purifying it from all personal and objective elements.

In one of his letters to her we read:—'Le charmant bonjour auquel je n'ai pu répondre avant hier me laissera le souvenir permanent d'une affectueuse expression caractéristique dont j'éprouve le besoin de vous remercier spécialement, quand vous y avez daigné mentionner votre bonheur de *m'acquérir*. En effet, c'est bien là, ma Clotilde, le mot qui nous convient mutuellement, pour désigner à chacun de nous sa meilleure propriété. Plus notre intimité se développe et se consolide, mieux je sens journellement que cette chaste union est devenue chez moi la principale condition d'un bonheur que j'avais toujours ardemment rêvé, mais sans pouvoir, hélas! l'éprouver jamais avant d'avoir subi votre bienfaisant empire.'

The remainder of his life was a perpetual hymn to her memory. Every week he visited her tomb. Every day he prayed to her and invoked her continual assistance. His published invocations and eulogies may call forth mockery from frivolous contemporaries—intense convictions and disinterested passions easily lending themselves to ridicule—but posterity will read in them a grave lesson, and will see that this modern Beatrice played a considerable part in the evolution of the Religion of Humanity. Philosophic students will admit that to act powerfully on the sentiments of others the philosopher must have first participated in them himself; and that the elaboration of a system in its emotional relations could only be accomplished by a thinker who had been profoundly moved. This initiation Comte gained through Madame de Vaux. In one of his letters to her he says:—'Mon organisation a reçu d'une très-tendre mère certaines cordes intimes, éminemment féminines, qui n'ont pu assez vibrer faute d'avoir été convenablement ébranlées. L'époque est enfin venue d'en développer l'activité, qui, peu sensible directement dans le premier volume, essentiellement logique, de mon prochain ouvrage, caractérisera fortement le tome suivant, et encore plus le quatrième ou dernier. C'est de votre salutaire influence que j'attends, ma Clotilde, cette inestimable amélioration, qui doit dignement écarter les reproches de certains critiques sur le prétendu défaut d'onction propre à mon talent, où quelques âmes privilégiées ont seules reconnu déjà une profonde sentimentalité implicite, en m'avouant avoir pleuré à certains passages philosophiques, ceux-là même que j'avais, en effet, écrits tout en larmes.'

It may be useful here to remark that Comte is frequently written against by those who know him only at second hand, as offensively dry, hard, materialistic, and irreligious; while by those who have more or less acquainted themselves with his writings, he is frequently condemned as a mystical, sentimental, and despotically moral pontiff. One class objects to him because he allows no place to the emotions; another because he makes philosophy too emotional. One class fulminates against his denial of religion; another class is more disposed to echo the apostrophe of Billaud Varennes to Robespierre, 'Avec ton Être suprême, tu commences à m'embêter!' He is called an atheist; and no one was ever more contemptuous towards atheism. He is called a materialist; and no great thinker was ever less amenable to the objections which that term connotes.

The contradictory charges are grounded upon a misapprehension of the scope and spirit of his philosophy, in the first place; and in the second upon the fact that there is a very wide divergence in Method and results between his early and later works. Up to 1842 he placed himself in the direct line of historical filiation, and subordinated his researches to the Objective Method; he resumed and systematised the efforts of his scientific predecessors in one vast and compact body of doctrine, creating a Philosophy out of the various sciences by giving unity to their scattered generalities. But after 1842 a radical change took place; the philosopher began to assume the position of a pontiff. He changed his Method (and was forced to change it), and coincident with this theoretical transformation, was the emotional transformation initiated by a profound affection and a profound sorrow.

Before setting himself to the composition of his second great work, Comte is supposed to have had another cerebral attack, though but a slight one, and of brief duration; and it will not be without indignation that impartial readers will observe how M. Littré, apparently to explain his rejection of the doctrines, insinuates that they were vitiated in their origin by that (hypothetical) cerebral attack. From unthinking and reckless adversaries such an accusation might be anticipated. From one who avows himself a disciple it could only escape reproof by being at least plausibly founded. Now on what grounds can M. Littré pretend that the cerebral attack, the very existence of which is a supposition of his own, and the duration of which must have been slight, vitiated the *Politique*, when he refuses to admit that the avowed, long continued, and violent attack which preceded the composition of the *Philosphie* in any respect vitiated that work? The contradiction is glaring. To suppose that a man issues from an attack of insanity lasting many months and characterised by extreme violence, without injury to his philosophical integrity, and many years afterwards suffers a radical metamorphosis through a very trivial attack, so trivial as to be only suspected from a passing phrase in a letter, is not indeed a supposition beyond the reach of psychological inference, and if supported by evidence would find little resistance; but for a disciple of the *Philosophie* to insinuate that the *Politique* has the taint of insanity, is a contradiction I am forced to point out. The weaknesses and extravagances which strike M. Littré in the second work cannot be adduced in proof, because those who reject the first work might on equal grounds detect insanity in the ideas which to them appear weak and extravagant. Moreover, M. Littré, as a student of Comte, ought not to have overlooked the very obvious germs of these extravagances which are in the *Philosophie*—the tendencies towards despotic systematisation and arbitrary fictions, which in the *Politique* have all the more freedom because unrestrained by established truths. As a student of history he ought not to have overlooked the fact that the unbridled employment of the deductive method was *inevitable* on a topic which was destitute of the requisite inductions; that is to say inevitable in the case of all who are not content to await the slow results of inductive investigation. Finally, and conclusively, M. Littré should not have failed to recognise in the *Politique* the same intellectual force, the same sustained power of conception and co-ordination, although with less successful result, as had commanded his veneration in the *Philosophie*. To reject the work may be permissible; to see in it the work of an intellect distorted by disease is an extravagance greater than any to be found in its pages. The reach of intellect and profoundly moral tone displayed in every chapter, can only be misconceived by those who estimate the force of a thinker according to the immediately available truths he offers them—an estimate which would make sad havoc with the pretensions of a Plato, a Descartes, a Spinoza, or a Hegel.

I am not pleading for the later system. On the contrary, my dissent from it is open and direct. All the later positivists regard me as a heretic. But I am a reverent heretic nevertheless: in other words, I profoundly admire the greatness and sincerity of the thinker, whom I believe to have attempted a task for which the materials were not ready. If men will approach the work with minds sufficiently open to receive instruction from teachers whom on the whole they refuse to follow, capable of setting aside differences, to seize upon and profit by agreements, they will carry away from the *Politique* many luminous suggestions, and that ennobling influence which always rays out from a moral conviction. They must be prepared to find passages to marvel at, passages to laugh at, and passages to fling hard words at. But they will detect even in these the presence of a magisterial intellect, carried by the deductive impetus beyond the limits of common prudence; they will detect nothing of the incoherence of insanity. Even the startling suggestion which he propounds on the basis of what he himself calls a daring hypothesis—i.e. that of the *Vierge Mère*—is a legitimate deduction from what many regard as established data; it happens to be absurd because the data are profoundly erroneous, although they have been, and still are, accepted by many scientific men as truths. Had the data been true, the deduction would have been as admirable as it is now laughable: it would have been a genuine scientific hypothesis.

Antagonism to the Method and certain conclusions of the *Politique positive* led me for many years to regard that work as a deviation from the Positive Philosophy in every way unfortunate. My attitude has changed now that I have learned (from the remark of one very dear to me) to regard it as an Utopia, presenting hypotheses rather than doctrines, suggestions for future enquirers rather than dogmas for adepts—hypotheses carrying more or less of truth, and serviceable as a provisional mode of colligating facts, to be confirmed or contradicted by experience. Grave students think it no misuse of time to study the *Republic* and the *Laws* of Plato. Let them approach the *Système de Politique positive* in a similar spirit; they will find there an intellect greater than Plato's, a morality higher and purer, and an amount of available suggestion incomparably greater.

Although no importance is to be attached to the slight cerebral attack (if attack there were) which preceded the composition of this work, there is intense biographical and psychological significance in the indications of the mental modifications which accompanied what may be called the development of the pontifical spirit in Comte. The germs are visible in his earliest years. No one can study the *Philosophie* without recognising the irrepressible tendency to domination, to a systematising circumscription of our aims with a view to unity (without, as Mr. Mill justly remarks, any demonstration of the necessity of such unity), and to reliance on deductive reasoning irrespective of objective verification. We see only the germs, because the soil of positive science was ill-suited to their development. Obliged to employ the Objective Method throughout, he was forced to restrain these tendencies, under penalty of failure. As he grew older, and lived more and more alone, absorbed in meditation, less and less occupied with what had been effected by others, his intense self-confidence became enormously exaggerated, and the disposition to take his own feelings as sufficient guarantee and proof, grew more and more disastrous. The very vividness of his conceptions, rising up during long and lonely meditation, rendered it difficult for him to doubt their reality; while the deductive impatience natural to a systematic intellect prevented his verifying their reality. He first struck out an hypothesis; he then overleaped the next condition of testing its conformity with fact: it became a truth in his mind, and he proceeded to deduce from it as from a verified truth. The awakening of an intense emotional life, and the welcome homage of a few ardent disciples, contributed their share. The conviction of an apostolic mission grew apace. The transformation of the systematic theorist into the pontiff was rapid. Those who were subjugated by his personal influence, or are fascinated by the seeming truth of his doctrines, will see a logical development in this; whereas we who stand aloof can see in it nothing but the unfortunate fatality which seems attached to deep convictions in certain powerful and arrogant natures. Those who consider Mahomet an impostor, and Loyola a malignant despot, may brand Comte with similar epithets of scorn or hatred. But if with a deeper sympathy and wider knowledge we mark the line between infirmity and strength, recognising that where the lights are brightest there the shadows are darkest, we shall be careful not to confound a common infirmity with an uncommon greatness. Hundreds of men have been as vain, as arrogant, as despotic in their tempers; but how many have been as severely ascetic, as profoundly moral, as devoted to high thoughts, and as magnificently endowed? We need not follow the errors of a great mind because of his greatness; but ought we to forget the greatness when we reject the errors?

After the publication of the *Politique* there is little of biographical importance to be added. In 1852 he had published the *Catéchisme positiviste,* a little work which, I think, has done more to retard the acceptance of his views than all the attacks of antagonists. It contains many profound and noble passages, and to thorough disciples is doubtless a precious work; but it should have been an esoteric work, at least for many years. Catechisms are for the converted. The objections to this one, apart from the ideas which, to all but believers, must appear without adequate foundation, are, first, that being brief and popular in form it is seized on by those who wish to 'know something about Comte' and are unwilling to take the requisite labour of reading the more serious works; secondly, that he was incapable of conducting a popular exposition in a dramatic form, hence a perpetual sense of the ridiculous vexes the reader, preventing his giving serious attention to the matter; thirdly, that in an unpromising and unconvincing form it puts forth ideas which could only escape ridicule and indignation by a very earnest, logical, and persuasive exposition. If my voice can have the slightest weight with the reader, I beg him not to open the Catechism until he has carefully studied the two great works by which Comte will live in history.

The *Synthèse subjective* he did not live to finish. It contains some precious thoughts, and much that is startling and extravagant. I am given to understand that some eminent mathematicians think highly of the mathematical philosophy it propounds.

Dr. Robinet has sketched the routine of Comte's daily life in these later years. The picture should be meditated by those whose irritation has led them to throw hard words at this 'materialist and scoffer.' He rose at five in the morning, prayed, meditated, and wrote until seven in the evening, with brief intervals for his two meals. Every day he read a chapter from the *Imitation of Christ* and a canto of Dante. Homer also was frequently re-read. Poetry was his sole relaxation now that he could not longer indulge his passion for the opera. From seven to nine (and on Sundays in the afternoon) he received visits, especially from working men, among whom he found disciples. On Wednesday afternoons he visited the tomb of Madame de Vaux. At ten he again prayed and went to bed. The hour of prayer was to him an hour of mystic and exquisite expansion. Nothing could be simpler than his meals: breakfast consisted only of milk; dinner was more substantial, but rigorously limited. At the close of dinner he daily replaced dessert by a piece of dry bread, which he ate slowly, meditating on the numerous poor who were unable to procure even that means of nourishment in return for their work.

He died September 5, 1857, at the age of sixty, leaving behind him an immortal name, and an almost canonised position in the memory of a select few, who still carry out, with admirable energy, the efforts to establish and spread the Religion of Humanity, undismayed by the ridicule and social persecution which await every religious movement at its outset.

The increasing notoriety of the name of Auguste Comte is significant of a spreading sympathy and a spreading dread. In grave treatises and in periodical works his opinions are silently adopted, openly alluded to, and discussed with respect; but much oftener they furnish a flippant sentence to some jaunty journalist, or pander to the austere dishonesty of some polemical theologian. Indignation, scorn, and ridicule are poured forth with all the greater freedom because usually unhampered by any first-hand knowledge. It is with him as it used to be with Kant, who not many years ago was a standing butt: many who had never opened the *Kritik*, and more who would have understood nothing of it had they read it, laughed at the 'dreamer' and his 'transcendental nonsense,' without any misgiving that they were making themselves ridiculous in the eyes of those who knew something about Kant. They are now respectful or silent. Surely it is wise to be entirely silent about that of which we know ourselves to be ignorant? As if our natural liability to error were not frequently misleading us, even in our most painstaking enquiries, we must add to it by what Mr. Mill somewhere calls 'the abuse of the privilege of speaking confidently about writers whom we have never read.' Few reflect that the exercise of this privilege is foolish; still fewer that it is dishonest. There is always peril in pretence. Silence cannot commit us. And if many delusively imagine that they do know enough of Comte to form a general estimate of him, let them ask themselves whether this knowledge is anything more than the echo of what others have said, those others being for the most part antagonists? Such a question would silence the candid; nothing will silence the garrulous and ignorant.

Nor is it only from the garrulous and ignorant that foolish and unworthy criticisms proceed. There is the fatal habit of many minds to take up a celebrated writer under the bias of a foregone conclusion; and a Darwin, or a Comte, is read, not with the serious desire to understand a doctrine, but to find contradictions and absurdities which may justify the savage satisfaction of contempt. But no polemics that are founded on a misconception of the adversaries' strength can seriously affect the ultimate triumph of a doctrine. The disciples of the Positive Philosophy may therefore disregard all attacks which do not expose its weak positions; and should endeavour to fortify the system where its weakness is made evident. Comte himself wisely abstained from all polemics. 'Si mes principes sont bons et opportuns,' he wrote to Valat, 'ils se défendront par leur propre poids et par la supériorité de leur application continue.'

There is but one point I shall notice, and this only because it is one which has a specious air, such as may impose on readers unacquainted with Science, or modestly underrating their judgment in such matters when opposed by scientific authorities. It is this: Comte founds his Philosophy on the Sciences; and we are triumphantly told that many men of science absolutely refuse to admit his competence; whence the conclusion suggested is that his Philosophy is unworthy of attention.

This conclusion is unacceptable, firstly, because the fact that many men of science speak contemptuously of Comte's pretensions is neutralised by the fact that some men, and these among the most eminent, speak admiringly; secondly, by the fact that the estimates formed by men of science are often determined by prejudices of an extra scientific order. Thus if a mathematician like Arago could express his opinion that Comte had no claim whatever to the mathematical proficiency which would entitle him to be elected a professor at the Ecole Normale, we have no need to enquire into the personal motives which dictated such an opinion, it is enough to cite the far weightier testimony of Poinsot, the greatest mathematician of his age, who warmly supported Comte's candidature for the chair. If a biologist like Professor Huxley can speak with hasty contempt of Comte's scientific pretensions, a biologist like De Blainville adopts Comte's views, and expounds them in his lectures; and a biologist like Charles Robin, who is learned in the history of his science, can declare that in no other writer has he found views so luminous and just respecting the philosophy of Biology, and has therefore been forced to follow Comte step by step.* I might mention several other eminent names, but these suffice; and even they are superfluous, because in the case of a doctrine so offensive to theological and metaphysical doctrines, and to the *amour-propre* of scientific specialists, it requires but slight acquaintance with history to appreciate this opposition at its true worth. Have we not seen Darwin proclaimed a 'mere amateur,' and as such excluded from the Académie des Sciences? And was not this contemptuous epithet applied to the biologist whose name will be immortal, the expression of M. Émile Blanchard, a specialist of European renown? If Darwin can be styled an amateur, Comte may be styled a smatterer; but who is damaged by such epithets?

§ II. THE POSITIVE PHILOSOPHY.

Philosophy, as we have seen in the various phases of its history, has always had one aim, that of furnishing an Explanation of the World, of Man, and of Society; but it has sought this aim by various routes. To solve the problems of existence, and to supply a rule of life, have constituted its purpose more or less avowed. Steady in this purpose, it has been vacillating in its means: now borrowing and now rejecting the principles and conclusions of its rival, Theology; now claiming and now violating the methods of Science; unwilling to follow either, incapable of advancing alone. We have seen it endeavouring to embrace all enquiry; and seen it in despair restricting itself to Psychology, in spite of the manifest incompetence of Psychology, even were it perfected, to furnish cosmical and social theories: an incompetence more or less recognized by metaphysicians, who refused to restrict their wide-sweeping enquiries to the mere investigation of human faculties, and the conditions of thought.

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* 'J'ai vainement cherché ailleurs que dans Auguste Comte, des vues d'ensemble plus profondément justes et lumineuses, concernant tout ce qui tient à l'objet et au but de la biologie, à ses relations avec les autres sciences, à la nature et à l'étendue de ses recherches essentielles, aux moyens d'investigation qui lui sont propres et aux parties de la logique en particulier de la philosophie en général, qu'elle développe et affermit. Aussi ai-je été forcé de suivre pas à pas ce philosophe dans cette partie de mon travail.'—CHARLES ROBIN: *De la Biologie*; first printed in the *Revue de la Philosophie positive*, p. 81, July 1867.

With the creation of the Positive Philosophy this vacillation ceases. A new era has dawned. For the first time in history an Explanation of the World, Society, and Man, is presented which is thoroughly homogeneous, and at the same time thoroughly in accordance with accurate knowledge: having the reach of an all-embracing System, it condenses human knowledge into a Doctrine, and co-ordinates all the methods by which that knowledge has been reached, and will in future be extended. Its aim is the renovation of Society. Its basis is Science—the positive knowledge we have attained, and may attain, of all phenomena whatever. Its method is the Objective Method which has justified its supremacy by its results. Its superstructure is the hierarchy of the sciences—i.e. that distribution and co-ordination of general truths which transforms the scattered and independent sciences into an organic whole wherein each part depends on all that precede, and determines all that succeed.

The cardinal distinctions of this system may be said to arise naturally from the one aim of making all speculations homogeneous. Hitherto Theology while claiming certain topics as exclusively its own (even within the domain of knowledge) left vast fields of thought untraversed. It reserved to itself Ethics and History with occasional incursions into Psychology; but it left all cosmical problems to be settled by Science, and many psychological and biological problems to be settled by Metaphysics. On the other hand Science claiming absolute dominion over all cosmical and biological problems, left Morals and Politics to metaphysicians and theologians, with only an occasional and incidental effort to bring these also under its sway. Thus while it is clear that society needs one Faith, one Doctrine, which shall satisfy the whole intellectual needs; on the other hand it is clear that such a Doctrine is impossible so long as three antagonistic lines of thought and three antagonistic modes of investigation are adopted. Such is, and has long been, the condition of Europe. A glance suffices to see that there is no one Doctrine *general* enough to embrace *all* knowledge, and sufficiently warranted by experience to carry irresistible conviction.

Look at the state of Theology:—Catholicism and Protestantism make one great division; but within the sphere of each we see numerous subdivisions; the variety of sects is daily increasing. Each sect has remarkable men amongst its members; but each refuses to admit the doctrines of the others. There is, in fact, no one general doctrine capable of uniting Catholics, Protestants, and their subdivisions. Look also at the state of Philosophy. There is no one system universally accepted: there are as many philosophies as there are speculative centres, almost as many as there are professors. The systems of Germany are held in England and Scotland as the dreams of alchemists; the Psychology of Scotland is laughed at in Germany, and neglected in England and France. Besides this general dissidence, we see, in France and Germany at least, great opposition between Theology and Philosophy openly pronounced. This opposition is inevitable: it lies in the very nature of Philosophy: and although, now as heretofore, many professors eagerly argue that the two are perfectly compatible and accordant, the discordance is, and always must be, apparent.

With respect to general doctrines, then, we find the state of Europe to be this: Theologies opposed to Theologies; Philosophies opposed to Philosophies; and Theology and Philosophy at war with each other. Such is the anarchy in the higher regions.

In the sciences there is less dissidence, but there is the same absence of any general doctrine; each science is on a firm basis, and rapidly improves; but a Philosophy of Science was nowhere to be found when Auguste Comte came forward with the express purpose of supplying the deficiency. The *speciality* of most scientific men, and their incapacity of either producing or accepting general ideas, has long been a matter of complaint; and this has been one great cause of the continuance of Metaphysics; for men of speculative ability saw clearly enough that however exact each science might be in itself, it could only form a part of Philosophy. Moreover the evil of speciality is not confined to neglecting the whole for the sake of the parts; it affects the very highest condition of Science, namely, its capability of instructing and directing Society.

In the early ages of speculation, general views were eagerly sought and easily obtained. As Science became rich and complex in materials, various divisions took place; and one man cultivated one science, another man another. Even then general views were not absent. But as the tide rolled on, discovery succeeding discovery, and new tracts of enquiry leading to vast wildernesses of undiscovered truth, it became necessary for one man to devote himself only to a small fraction of a science, which he pursued, leaving to others the task of bringing his researches under their general head. Such a minute division of labour was necessary for the successful prosecution of minute and laborious researches; but it ended in making men of science regard *only* the individual parts of science; the construction of general doctrines was left to philosophers. A fatal error: for such doctrines could only be truly constructed out of the materials of Science and upon the Method of Science.

In the present state of things the speculative domain is composed of two very different portions,—general ideas and positive sciences. The general ideas are powerless because they are not positive: the positive sciences are powerless because they are not general. The new Philosophy is destined to put an end to this anarchy, by presenting a Doctrine which is *positive,* because elaborated from the sciences, and yet possessing all the desired *generality* of metaphysical doctrines, without possessing their vagueness, instability, and inapplicability.

How is this to be effected? Obviously by taking Science as the basis. The teaching of history is clear. Everywhere, Science with its all-conquering Methods is seen steadily advancing, drawing more and more subjects under its rule, yielding answers to more and more problems while Theology and Metaphysics remain impotent to furnish satisfactory answers,and are constantly found in flagrant contradiction with the certainties of experience. There are but three modes of explaining phenomena, and of these the scientific mode daily gains strength, the other two daily lose their hold upon men. If the present anarchy is due to the simultaneous employment of three radically incompatible modes of thought, obviously the cessation of that anarchy must follow on the general adoption of only one of these modes of thought. The question is, which are we to select? When Theology was supreme there was unity in doctrine and unity in life. All men accepted the theological explanation of the world, man and society. But in proportion as knowledge advanced, this explanation was discovered to be incessantly in contradiction with experience. If, therefore, we are to select the theological mode of thought as our guide, and the theological explanation of the Cosmos and Society as our doctrine, we must ignore all experience, sweep away all science, and appeal to the Pope or to the Archbishop of Canterbury for answers to the questions in Astronomy, Physics, Chemistry, Biology, and Sociology, which our pressing needs or speculative curiosity may force upon us. Is Europe prepared for this? Is any one nation prepared for it? Is any cultivated mind prepared for it?

The incompetence of Metaphysics has been clearly exhibited in this History. Nothing, therefore, but Science remains. Nevertheless, Science itself only furnishes the basis. It must be transformed into a Philosophy before it can satisfy the higher needs. Even the encyclopædic knowledge of a Humboldt was powerless, because it was scientific knowledge, not Philosophy; and because, moreover, even as scientific knowledge it had the fatal defect of incompleteness—it embraced cosmical, but excluded sociological speculations. Supposing Humboldt to have mastered, what he was far from conceiving, the philosophy of the cosmical sciences, he would still have left the great problem untouched, he would have failed to propound a homogeneous doctrine, since he would have left the vast and important field of moral speculation to theologians or metaphysicians. The completion of the scientific encyclopædia was therefore a necessary preliminary; and this was effected by the creation of Sociology, as a science ranking with the cosmical sciences. This task was reserved for the genius of Auguste Comte. Having done this, he held in his hand the complete materials for an universal Philosophy. All human knowledge was now capable of being treated as a homogeneous and organic whole, one spirit, one method, and one aim presiding over each department.

But this was only the first step, though a step of immense importance. Having before him the materials of a Philosophy, materials furnished by the efforts of all preceding generations, he had next to organise them. The several sciences had to furnish their philosophies, and to yield a Philosophy which embraced the whole. The philosophy of each science is the co-ordination of its fundamental truths and special methods; consequently the co-ordination of these philosophies—the proper distribution of these truths and methods in a dependent series—will yield the philosophy of Science.

We shall have to consider this organisation of the sciences more in detail hereafter; for the present it is enough to point out the position it occupies in the evolution of the new doctrine. When we add thereto the Law of Development, through the theological, metaphysical, and positive stages (of which also more anon), we have completed an indication of the great legacy Comte has left. These are his contributions, his titles to immortal fame. They have been and will be disputed, as other men's titles have been and will be. Some deny that they are his; others deny that they are of value. I shall not discuss these questions. But although I consider discussions respecting originality to be commonly interminable and idle, there is one point which may profitably be noticed, and that is the confusion between the positive spirit and method, and the Positive Philosophy; a confusion which once cleared up may prevent much idle dissertation.

What is called the positive or scientific spirit is coeval with Science; indeed, only in that spirit is Science possible; and from the time of Galileo, Bacon, and Descartes, it dates its recognition as a distinct power. In this sense, therefore, we may truly say that positive thinkers have never been wanting, and that the whole course of tradition has set steadily in the direction of the new doctrine. Even the untutored savage so far employed the Objective Method that in certain very familiar and accessible phenomena he was content with the visible and tangible properties, and never sought outlying agencies to account for them. As knowledge advanced men withdrew more and more phenomena from the regency of outlying agencies, and placed them under the regency of immanent properties: deities and entities were replaced by laws.

But the method was only partially applied. In all cases not sufficiently explored, men continued—and the majority still continues—to place unhesitating reliance on the action of outlying agencies, simply because they had not discovered the immanent properties. Hence the continuous spectacle of minds completely dominated by the Scientific Method in Astronomy, Physics, and Chemistry, unwilling to extend their principles to Biology, disdainful of the proposal to apply them to Psychology, and regarding it as both foolish and wicked to apply them to History, Politics, and Morals.

If, however, the Positive Method is in germ as old as Science, and if with gradual and ever-accelerated velocity it has encroached upon and absorbed each department of enquiry, so that we now see its final adoption to be inevitable,* this does not in any way lessen Comte's originality, does not diminish the need for a Positive Philosophy, as the offspring of that Method. Positive thinkers may be counted by thousands, but no one before Comte had a glimpse of the Positive Philosophy. Thousands had cultivated Science, and with splendid success; not one had conceived the Philosophy which the sciences when organised would naturally evolve. A few had seen the necessity of extending the scientific Method to *all* enquiries, but no one had seen how this was to be effected; and the proof of this is exhibited in the vague and fragmentary nature of all previous attempts, and in the absence of all vision of it as a renovating and harmonising principle which could transform Science into a Philosophy and thus furnish a homogeneous Doctrine. In this, as in most other parts of the system, we see how Comte gathered together in one luminous focus the scattered rays which issued from various sides. So long as the rays were scattered men could read but little by their light.

The Positive Philosophy is novel *as* a Philosophy, not as a collection of truths never before suspected. Its novelty is the organisation of existing elements. Its very principle implies the absorption of all that great thinkers had achieved; while incorporating their results it extended their methods. To assert, therefore, that Comte only placed himself in the ranks of the advancing column, filling a place which would have otherwise been filled by others, is, I conceive, an immense mistake ; and I regret to find Mr. Herbert Spencer countenancing it; though his avowedly superficial acquaintance with the system renders the error excusable. He says, 'M. Comte designated by the term "Positive Philosophy" all that definitely-established knowledge which men of science have been gradually organising into a coherent body of doctrine.'* Not so: the 'coherent body of doctrine' is precisely that which no one has ever attempted since Science emerged from a metaphysical condition. And Mr. Mill, following in the same track, says, 'the philosophy called Positive is not a recent invention of M. Comte, but a *simple adherence to the traditions* of all the great scientific minds whose discoveries have made the human race what it is. M. Comte has never presented it in any other light (!) But he has made the doctrine his own by his manner of treating it.'† M. Littré, with just astonishment, exclaims, 'The great scientific minds? This term implies what seems to me a confusion. Does it mean the philosophers? Why, the philosophers, one and all, have belonged to theology or metaphysics, and it is not their tradition which M. Comte has followed. Does it mean those who have illustrated particular sciences? Well, since they have not philosophised, M. Comte cannot have received his philosophy from them. That which is recent in the positive philosophy, that which is M. Comte's invention, is the conception and construction of a philosophy, by drawing from particular sciences, and from the teaching of great scientific minds, such groups of truths as could be co-ordinated on the positive method.'‡

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* 'Pour terminer radicalement ce désordre, la seule manière est de le détruire dans son principe, en ramenant le système intellectuel à l'unité. Or cela ne peut se faire que de deux manières : ou bien en rendant à la philosophie théologique (car il est inutile de parler ici de la métaphysique, qui ne serait jamais qu'une transition) toute l'influence qu'elle a perdue ; ou bien en complétant la philosophie positive de façon à la rendre capable de remplacer définitivement la théologie. Si donc on regarde comme démontrée l'impossibilité de rétablir la théologie dans toute l'étendue de son ancien empire, il n'y a pas d'autre solution admissible que la formation définitive de la philosophie positive.'—*Politique positive*, iv. *Appendice*, p. 160.

On reconsideration Mr. Mill may perhaps admit that the light which flashed upon his own mind when first he became acquainted with Comte's work was something essentially unlike what would have issued from a simple adherence to tradition. He had little to learn on the score of what great thinkers had taught, and must have known but too well that they had no coherent body of doctrine to teach. Further, he will admit that Comte, who was keenly alive to the debt he owed his predecessors,* and nobly generous in his recognition of even a suggestion, would have been astonished to hear that what he regarded as his great achievement—the organisation of the results of research into a doctrine—was no more than an adherence to tradition. What tradition brought was the results; what Comte brought was the *organisation* of those results. He always claimed to be the founder of the Positive Philosophy. That he had every right to such a title is demonstrable to all who distinguish between the positive sciences and the Philosophy which co-ordinated the truths and methods of those sciences into a doctrine. The achievement was great and novel; but its very perfection, which arises from its intimate harmony with all the great results of scientific research, prevents the feeling of strangeness which usually accompanies novelty.

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* SPENCER: *The Classification of the Sciences*, 1864, p. 28.

† MILL: *Auguste Comte and Positivism*, 1865, p. 9.

‡ *Revue des Deux Mondes*, 15 août 1866.

Having thus defined the position of the new Philosophy in History, and Comte's relation to it, we may look a little closer into its nature. The creation of Sociology, by which the series of the sciences was completed, will perhaps best be appreciated after an exposition of his classification of the sciences. This indisputably was entirely his own, and so far from being simply an ingenious arrangement without capital importance, as many critics have supposed, it is nothing less than the organisation of the sciences into a Philosophy. For let us understand the problem:—Given human knowledge in its multiplicity of details and vast extent, how on this basis, and with these materials, to raise a general Doctrine? All must be included, or the Doctrine will be incomplete; no established truths must be contradicted, or the Doctrine will be imperfect. There was no great difficulty in constructing a Philosophy by the aid of one or more of the sciences, selecting such truths as suited the construction, and neglecting such as were adverse to it. That had been done by hundreds. But nothing could be gained by that. The old difficulty remained. To construct a Doctrine which should harmonise all results and embrace all methods, was the labour imposed upon Philosophy. In the presence of the vast accumulations of modern Science the task seemed hopeless. How was any one mind to master all the sciences, and, having mastered them, reduce them to an intelligible system? What lifetime could extend far enough even to traverse these fields, and roads, and byeways? Obviously the first step to be taken was to reduce the chaos to order, to make such a general disposition of the various groups as would enable the mind to see their main bearings—in a word to classify the groups, as each group itself had classified the phenomena it studied. If the reader is unacquainted with Comte's classification he will be in the true condition for appreciating the immensity of the effort. Let him ask himself how he would proceed if in presence of the vast multiplicity of sciences already established he had to introduce such an order as would of itself constitute a Philosophy because it would represent the serial dependence of all natural phenomena?

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* 'Nous avons ainsi systématiquement réalisé une évolution individuelle radicalement conforme à l'évolution nécessaire de l'humanité, que l'on peut maintenant se borner à considérer ici à partir de l'impulsion décisive déterminée par la double action philosophique et scientifique émanée de Bacon et de Descartes conjointement avec Kepler et Galilée. . . . En outre, l'homogénéité continue de ces diverses déterminations partielles nous a spontanément manifesté leur convergence croissante vers une même philosophie finale. Pour caractériser convenablement cette philosophie il ne nous reste donc plus qu'à indiquer la co-ordination définitive de ces différentes conceptions essentielles, d'abord logiques puis scientifiques, d'après un principe d'unité réellement susceptible d'une telle efficacité, afin de pouvoir signaler la véritable activité normale réservée au système qui doit devenir la base usuelle du régime spirituel de l'humanité.'—*Philosophie positive*, vi. pp. 645–6; compare the passage in the Appendix to the *Politique positive*, iv. p. 91.

The first luminous conception which enabled Comte to discover this order was the fundamental distribution of all sciences into Abstract and Concrete. The abstract sciences are those which treat of the elementary laws, or general facts, on which all the particular facts depend; they are called abstract because in them the mind fixing itself solely on some elementary fact which it discovers under a great variety of phenomena or complicated with other elementary facts, abstracts this from all its surroundings, purifies it from all its variations, and considers it in itself. Thus all bodies whatever present the elementary facts of Number, Form, and Movement; they present other facts besides these, but these can be considered apart, and from them arise Algebra, Geometry, and Mechanics. Besides Number, Form, and Movement, bodies present facts of Weight, Temperature, Luminousness, &c., which likewise can be considered apart, and Physics is the abstract science of these facts. Further we find bodies presenting facts of combination and decomposition, and Chemistry results. Finally we find certain bodies presenting facts of growth, reproduction, and sensation, and these facts we abstract in Biology.

Whether there are elementary facts capable of being abstracted from social phenomena and yielding a Sociology may, for the present, be left in abeyance: the groups just indicated are groups admitted by every thinker. An attentive consideration of them discloses that they embrace all the elementary facts we have hitherto been able to abstract from cosmical phenomena; and all of these we have been able to consider apart, as pure relations without reference to any special occasion, or any variations in the manifestation of the phenomena. Thus the physical phenomena of falling bodies are variable and complicated, but the physical law is invariable and simple: the circumstances may vary, the heights may differ, but the relation of the height fallen through to the time of falling remains invariable.

Not only do these groups comprise the whole of the elementary cosmical facts, but implicitly in these facts are comprised all the multiple and complex phenomena ranged under the concrete sciences, which treat of objects as actually presented to us under the conditions of time and space. Geology is a concrete science; so is Mineralogy; so is Botany. Each deals with objects, not with abstract relations. Each considers existences as determined by complex conditions. The rock, the mineral, or the flower is considered as an object involving more or less of the elementary facts of Mathematics, Physics, Chemistry, and Biology; and only through the knowledge of these elementary facts can the objects be known except empirically.

D'Alembert has noticed the paradox that 'les notions les plus abstraites, celles que le commun des hommes regarde comme les plus inaccessibles, sont souvent celles qui portent avec elles une plus grande lumière; l'obscurité s'empare de nos idées à mesure que nous examinons dans un objet plus de propriétés sensibles.' * But the paradox disappears when we reflect that these abstract ideas express the elementary and constant relations of the complex and variable phenomena. It is true that the discovery of these simple relations is a laborious task. At first man is observant only of particular phenomena in their isolation: he then begins to perceive their connections; and finally decomposes them into their constant relations—this is the birth of Science, which only occupies itself with relations of succession and coexistence.

Abstract Science then is the knowledge of the elementary facts, or Laws of phenomena; Concrete Science is the knowledge of objects as actual combinations of these elements. The one investigates existence, the other individuals. The abstract sciences necessarily precede the concrete sciences in dogmatic value; and they suffice to furnish a Philosophy, since they comprise the elements of all speculative knowledge in comprising the elementary facts of Universal existence.

What is a law? what is an elementary fact of existence? It is the invariable relation between two distinct phenomena, according to which one depends on the other; the relation being invariable, the only variation which is possible is in the *intensity* of the phenomena or their *direction*. Here therefore we have two distinct aspects of Nature: one which is inaccessible to human intervention, uncontrollable by human skill, a Fatality which must be accepted; and another which is accessible to human intervention, a Modifiability which enables us to convert the Fatality into a power for our benefit. The Laws of Nature are immutable. But owing to this, the resultant phenomena are so far modifiable that their directions may be adapted to our service. We cannot create or destroy a particle of Matter, or a moment of Force; but we can so arrange Matter that the Force shall be our servant.* It is the very unchangeableness of the Laws which renders their results modifiable. Because the course is unswerving, it can be accurately measured, accurately foreseen, accurately directed. The phenomena are but combinations of elementary laws. Each law preserving its value under all circumstances, never varying one iota, we know precisely what will be its value in combination with other laws. The simplest illustration of this is the composition of forces in Mechanics; among the more striking illustrations are the triumphs of discovery on the one side, and of mechanical inventions on the other. Owing to this unchangeableness, a mathematician working with symbols in his study can tell the astronomer to point his telescope in a particular direction, and there for the first time will be seen a planet which has a revolution of 164 years 6 days, and which is twenty-five times as large as our earth; and the astronomer, confident in the previsions of Science, discovers what he is told will be discovered. The formula 'under similar circumstances similar phenomena will appear' carries with it the consequence that when the phenomena are different it is owing to some difference in the circumstances. Not only so, but when the phenomena differ owing to an alteration in the circumstances, there still exist the same fixed relations between them; thus proving that the variations have been variations in the combination of elementary Laws, leaving these Laws unaltered. In other words, the Universe is governed by immutable Laws, general facts which determine all particular facts; and the Abstract Sciences are the registration of these general facts, as the Concrete Sciences are of the particular facts.

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* D'ALEMBERT: *Discours préliminaire de l'Encyclopédie.*

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* 'En considérant que chaque groupe de phénomènes ne peut jamais être entièrement fixe, on reconnaît que l'immuabilité des lois naturelles ne saurait convenir aux événements composés, et reste toujours bornée à leurs éléments irréductibles.'—*Synthèse subjective*, p. 7.

Although the division into Abstract and Concrete Sciences, the latter depending on the former, was of absolute importance as a first step, there still remained the need of a classification of the Abstract Sciences themselves, if they were to yield a Doctrine; and the execution of this difficult task displays the genius of Auguste Comte. But the operation seems so easy now it is accomplished, especially to those who have not long meditated on the nature of the problem, that he rarely gains the credit which is his due. Any vulgar mariner can reach America after Columbus.

The classification differs from all previous classifications, as that of Jussieu, in Botany, differed from those of Linnæus and Tournefort, namely, in grounding its divisions on the natural distinctions presented by the phenomena, not on any conception of symmetry or convenience. It is an objective grouping, not a subjective grouping. The principle adopted is that which permeates the Positive Philosophy, namely, the principle of dependence. The Concrete Sciences are separated from the Abstract Sciences because they exhibit particular cases of the general laws, and depend upon them. In like manner the Abstract Sciences themselves are ranged in a serial order constituted by their gradations of dependence; one succeeds the other according to the principle of decreasing generality and increasing complexity, that which has phenomena the most general and least complex (Mathematics) standing first, and that which has phenomena the least general and most complex (Sociology) standing last. Between these terms the sciences are so distributed that each serves as a necessary introduction to the comprehension of its successors, and each becomes an instrument of exploration taken up by the mind in traversing the field of philosophic investigation. Not only so, but because the series represents the natural order it cannot anywhere be inverted. Each science, after the first, embraces phenomena which can only be explained by the laws of the science preceding it in addition to laws peculiarly its own. Thus the truths of Number are the most general truths of all; they are true of all things whatever; all things depend on them, but they depend on no prior conditions. A science of Number, i.e. Arithmetic and Algebra, may thus be studied without reference to any other science. Next in order of generality and simplicity stand the truths of Form; Geometry presupposes the laws of Number, and must therefore be studied with reference to them, but requires no other aids. Then come the truths of Motion, which furnish the science of Mechanics: here we find the operation of the laws of Number and Form necessarily determining the laws of Motion; so that while it is quite feasible to study Algebra and Geometry in ignorance of Mechanics, it is impossible even to state the laws of Equilibrium and Motion without involving the laws of Number and Form. The movement of a body oscillating round a fixed point is determined by the form of that body; but its form is independent of this movement. In Astronomy we have phenomena which depend on these preceding laws of Number, Form, and Motion, and besides these on the law of Gravitation, which law in no way affects the laws of Mathematics. Physics succeeds, and presents us with phenomena which depend on mathematical laws and—inasmuch as all terrestrial phenomena are affected by influences derived from the heavenly bodies—on astronomical laws. Chemistry presents us with phenomena of a peculiar kind, but these are all seen to be influenced by the laws of Physics, Astronomy, and Mathematics, though they cannot in turn be said to influence these laws. Biology presents us with phenomena of Life, obviously dependent on laws of Chemistry, Physics, Astronomy, and Mathematics, and obviously not influencing these. Finally we have the laws of social existence, embracing the phenomena of human society (Sociology), and these clearly depend on the laws of organic life, and through them on the laws of inorganic nature, on the vital and physical conditions which alone permit society to exist and be developed. But just as it is impossible to deduce social phenomena from biological and physical laws alone, without the aid of laws peculiar to social existence, so is it impossible to deduce vital phenomena from chemical and physical laws, impossible to deduce chemical phenomena from physical and mathematical laws, and impossible to deduce physical phenomena from mathematical laws alone:* thus each science adds its own peculiar group of laws to all those which precede it in the series, and each gathers up into its grasp the methods and results of all that have gone before it, serving in turn as a stepping-stone to that which comes after it.

Thus does the series embrace all human knowledge† as regards the elementary laws of the World, Man, and Society. It represents both the objective dependence of the phenomena, and the subjective dependence of our means of knowing them. It constructs a series which makes all the separate sciences organic parts of one Science; and it enables the several philosophies to yield a Doctrine which is, what no other Doctrine has ever been, coextensive with human knowledge, and homogeneous throughout its whole extent: that is to say, while theological and metaphysical systems have necessarily been constructed out of heterogeneous materials, and have either omitted scientific questions, or else have been forced with them to admit the scientific Method on which answers could be gained, this Doctrine treats all knowledge in one spirit, and views the whole Cosmos in one light.

Exactly eight-and-twenty years have passed since I first became acquainted with this serial arrangement of the sciences, and, during the interval, its value has been repeatedly tested in the course of my researches both in Science and in the History of Science. Great as that value has been to me, I have several times felt my confidence in it falter in the presence of facts: these hesitations, however, successively subsided, and left behind them an increased conviction of the importance of the classification. This personal experience is not cited as an argument in favour of the series, but simply of an intimation to the earnest student that he may expect to find doubts arising, and should be slow to condemn the classification directly it seems imperfect. Only a long application of it will enable him thoroughly to appreciate its value, and to set aside certain superficial objections. As to the adverse criticisms of it which have been published, those at least which have fallen in my way, I cannot confess that any of my hesitations came from them. The critics have not taken the trouble to master the principles of the classification; not one of them seems to have considered what the object was, nor how such an object constituted an integral part of the Positive Philosophy. Usually they speak of it as if it were a more or less ingenious arrangement, of no great moment in itself, and easily replaced by some other ingenious scheme. Of its vital importance in the study of Science, and History, no suspicion is felt. I except, in some degree, Mr. Herbert Spencer, though he also seems to have misapprehended the spirit and aim of the classification, which he has attacked with his usual vigour and acumen, in a remarkable essay on the Genesis of Science,'* not, I think, with success; and his ill-success appears in stronger relief in the classification which he proposes as a substitute.† M. Littré has examined and satisfactorily refuted his criticisms,‡ and Mr. Mill remarks that 'after giving to his animadversions the respectful attention due to all that comes from Mr. Spencer, we cannot find that he has made out any case. It is always easy to find fault with a classification. There are a hundred possible ways of arranging any set of objects, and something may almost always be said against the best, and in favour of the worst of them. But the merits of a classification depend on the purposes to which it is instrumental. We have shown the purposes for which M. Comte's classification is intended. Mr. Spencer has not shown that it is ill-adapted to those purposes; and we cannot perceive that his own answers any ends equally important. His chief objection is that if the more special sciences need the truths of the more general ones, the latter also need some of those of the former, and have at times been stopped in their progress by the imperfect state of the sciences which follow long after them in M. Comte's scale; so that the dependence being mutual, there is a *consensus*, but not an ascending scale or hierarchy of the sciences. That the earlier sciences derive help from the later is undoubtedly true; it is part of M. Comte's theory, and amply exemplified in the details of his work.* When he affirms that one science historically precedes another, he does not mean that the perfection of the first precedes the humblest commencement of those which follow. Mr. Spencer does not distinguish between the empirical stage for the cultivation of a branch of knowledge, and the scientific stage.'

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* Impossible at present, and likely to remain so for some generations, although a prophetic view discerns in the distant future a reduction of all cosmical phenomena to Mechanics; the doctrine of vibrations will then be the Abstract Science of which all cosmical sciences will be the Concretes.

† In his latter speculations, COMTE added a seventh science under the name of Morals, separating its subject-matter from Biology and Sociology. This does not affect the classification, however.

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* SPENCER: *Essays, First Series,* 1858.

† *The Classification of the Sciences,* 1864.

‡ *Auguste Comte et la Philosophie positive,* chap. vi.

Neither M. Littré nor Mr. Mill has noticed the initial principle of Mr. Spencer's criticism, which is that of the rejection of all distribution of the sciences into a series. 'Did we believe a serial arrangement possible,' he says, 'that of M. Comte would certainly be the one we should adopt.' But he dissents from the conception. 'There is no one *rational* order among a host of possible systems. There is no true *filiation* of the sciences. The whole hypothesis is fundamentally false: indeed, it needs but a glance at its origin to see at once how baseless it is. Why a *series*? What reason can we have to suppose that the sciences admit of a *linear* arrangement? Where is our warrant for assuming that there is some *succession* in which they can be placed? There is no reason; no warrant.' *

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* Mr. MILL might here have quoted the explicit language of COMTE in introducing his classification: 'En effet non-seulement les diverses parties de chaque science qu'on est conduit à séparer dans l'ordre *dogmatique* se sont, en réalité, développées simultanément et sous l'influence les unes des autres, ce qui tendrait à faire préférer l'ordre *historique*; mais en considérant, dans son ensemble, le développement effectif de l'esprit humain, on voit de plus que les différentes sciences ont été dans le fait perfectionnées en même temps et mutuellement; on voit même que le progrès des sciences et ceux des arts ont dépendu les uns des autres, par d'innombrables influences réciproques, et enfin tous ont été étroitement liés au développement général de la société humaine.' *Philosophie positive*, i. 81; and a little farther on he adds that no classification can be rigorously conformable with the historical development. 'Il faut tâcher seulement qu'un tel inconvénient n'ait lieu relativement aux conceptions caractéristiques de chaque science.' Comp. *Politique positive*, iii. 41.

No reason? The best of reasons! No warrant? The strongest warrant! The reason for supposing that the sciences admit of a linear arrangement is the fact that the corresponding phenomena admit of it; the dependence of physical laws on the mathematical, and of chemical laws on the physical, and of biological laws on the chemical, is not a figment of Comte's, but an observed fact. As Bichât says of his own classification of the tissues, 'c'est la nature, et non la science, qui a tiré une ligne de démarcation èntre eux.' And the warrant for assuming that there is some succession in which the sciences can be placed, is that the effective study of these sciences demands such a succession as the one corresponding to the successive complexity of the phenomena. It is quite true, and no one was more alive to it than Comte, that all the sciences are interwoven, and that the highest seeks aid in the lowest; but because of this are we to reject the immense speculative assistance of a serial arrangement? Mr. Spencer asks, why is a series necessary? It is necessary on grounds similar to those which require that the various truths constituting a science should be systematically co-ordinated, although in nature the phenomena are intermingled. That classification of ideas which transforms Common Knowledge into Science, arranging the phenomena in the order of their dependence, and bringing the particular under the general relations,—which makes the heterogeneous parts assume a homogeneous unity,—must also be performed for the several sciences. And this operation Comte has effected. No one else has done it.

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* SPENCER: *Essays*, pp. 171-183.

Because the hierarchy of the sciences is an integral part of the Positive Philosophy, it has claimed this somewhat lengthy notice, which is still, however, too brief except as a general indication. We must now pass to another integral part of the doctrine, namely, the creation of a new science, Sociology, which was rendered possible by Comte's discovery of the Law of Evolution.

The necessity of reducing social phenomena to scientific Method had long been felt. The daily increasing disregard for theological and metaphysical habits of thought, and the growing conviction that the Method which had been proved so brilliantly successful in explaining cosmical phenomena ought also to be applied to social phenomena, received a further impulse when the idea became general that social phenomena were in reality subject to Law, and consequently were as capable of scientific investigation as all other phenomena, only far more complicated and difficult. But it is one thing to conceive generally that social science is possible, another thing to create the science. Mr. Mill holds that Comte first made the creation of this science possible, but denies that he created it. As I shall presently have to urge Comte's claim, I will borrow his critic's exposition of what he accepts:—

'The Method proper to the Science of Society must be, in substance, the same as in all other sciences; the interrogation and interpretation of experience, by the twofold process of Induction and Deduction. But its mode of practising these operations has features of peculiarity. In general, Induction furnishes to science the laws of the elementary facts, from which, when known, those of the complex combinations are thought out deductively: specific observation of complex phenomena yields no general laws, or only empirical ones; its scientific function is to verify the laws obtained by deduction. This mode of philosophizing is not adequate to the exigencies of sociological investigation. In social phenomena the elementary facts are feelings and actions, and the laws of these are the laws of human nature, social facts being the results of human acts and situations. Since, then, the phenomena of man in society result from this nature as an individual being, it might be thought that the proper mode of constructing a positive Social Science must be by deducing it from the general laws of human nature, using the facts of history merely for verification. Such, accordingly, has been the conception of social science by many of those who have endeavoured to render it positive, particularly by the school of Bentham. M. Comte considers this as an error. We may, he says, draw from the universal laws of human nature some conclusions (though even these, we think, rather precarious) concerning the very earliest stages of human progress, of which there are either no, or very imperfect, historical records. But as society proceeds in its development, its phenomena are determined, more and more, not by the simple tendencies of universal human nature, but by the accumulated influence of past generations over the present. The human beings themselves, on the laws of whose nature the facts of history depend, are not abstract or universal but historical human beings, already shaped, and made what they are, by human society. This being the case, no powers of deduction could enable anyone, starting from the mere conception of the Being Man, placed in a world such as the earth may have been before the commencement of human agency, to predict and calculate the phenomena of his development such as they have in fact proved. If the facts of history, empirically considered, had not given rise to any generalizations, a deductive study of history could never have reached higher than more or less plausible conjecture. By good fortune (for the case might easily have been otherwise), the history of our species, looked at as a comprehensive whole, does exhibit a determinate course, a certain order of development: though history alone cannot prove this to be a necessary law, as distinguished from a temporary accident. Here, therefore, begins the office of Biology (or, as we should say, of Psychology) in the social science. The universal laws of human nature are part of the data of sociology, but in using them we must reverse the method of the deductive physical sciences: for while, in these, specific experience commonly serves to verify laws arrived at by deduction, in sociology it is specific experience which suggests the laws, and deduction which verifies them. If a sociological theory, collected from historical evidence, contradicts the established general laws of human nature; if (to use M. Comte's instances) it implies, in the mass of mankind, any very decided natural bent, either in a good or in a bad direction; if it supposes that the reason, in average human beings, predominates over the desires, or the disinterested desires over the personal; we may know that history has been misinterpreted, and that the theory is false. On the other hand, if laws of social phenomena, empirically generalized from history, can when once suggested be affiliated to the known laws of human nature; if the direction actually taken by the developments and changes of human society, can be seen to be such as the properties of man and of his dwelling-place made antecedently probable, the empirical generalizations are raised into positive laws, and Sociology becomes a science.

'Much has been said and written for centuries past, by the practical or empirical school of politicians, in condemnation of theories founded on principles of human nature, without an historical basis; and the theorists, in their turn, have successfully retaliated on the practicalists. But we know not any thinker who, before M. Comte, had penetrated to the philosophy of the matter, and placed the necessity of historical studies as the foundation of sociological speculation on the true footing. From this time any political thinker who fancies himself able to dispense with a connected view of the great facts of history, as a chain of causes and effects, must be regarded as below the level of the age; while the vulgar mode of using history, by looking in it for parallel cases, as if any cases were parallel, or as if a single instance, or even many instances not compared and analysed, could reveal a law, will be more than ever, and irrevocably, discredited.

'The inversion of the ordinary relation between Deduction and Induction is not the only point in which, according to M. Comte, the Method proper to Sociology differs from that of the sciences of inorganic nature. The common order of science proceeds from the details to the whole. The method of Sociology should proceed from the whole to the details. There is no universal principle for the order of study, but that of proceeding from the known to the unknown; finding our way to the facts at whatever point is most open to our observation. In the phenomena of the social state, the collective phenomenon is more accessible to us than the parts of which it is composed. This is already, in a great degree, true of the mere animal body. It is essential to the idea of an organism, and it is even more true of the social organism than of the individual. The state of every part of the social whole at any time is intimately connected with the contemporaneous state of all the others. Religious belief, philosophy, science, the fine arts, the industrial arts, commerce, navigation, government, all are in close mutual dependence on one another, insomuch that when any considerable change takes place in one, we may know that a parallel change in all the others has preceded or will follow it. The progress of society from one general state to another is not an aggregate of partial changes, but the product of a single impulse, acting through all the partial agencies, and can therefore be most easily traced by studying them together. Could it even be detected in them separately, its true nature could not be understood except by examining them in the *ensemble*. In constructing, therefore, a theory of society, all the different aspects of the social organization must be taken into consideration at once.'

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There is one more point in the general philosophy of sociology* requiring notice. Social phenomena, like all others, present two aspects, the statical, and the dynamical; the phenomena of equilibrium, and those of motion. The statical aspect is that of the laws of social existence, considered abstractedly from progress, and confined to what is common to the progressive and the stationary state. The dynamical aspect is that of social progress. The statics of society is the study of the conditions of existence and permanence of the social state. The dynamics studies the laws of its evolution. The first is the theory of the *consensus*, or interdependence of social phenomena. The second is the theory of their filiation.

'The first division M. Comte, in his great work, treats in a much more summary manner than the second; and it forms, to our thinking, the weakest part of the treatise. He can hardly have seemed even to himself to have originated, in the statics of society, anything new,* unless his revival of the Catholic idea of a Spiritual Power may be so considered. The remainder, with the exception of detached thoughts, in which even his feeblest productions are always rich, is trite, while in our judgment far from being always true.'

Passing from the consideration of Social Statics to Social Dynamics, Mr. Mill continues:

'Two questions meet us at the outset: Is there a natural evolution in human affairs? and is that evolution an improvement? M. Comte resolves them both in the affirmative by the same answer. The natural progress of society consists in the growth of our human attributes, comparatively to our animal and our purely organic ones: the progress of our humanity towards an ascendency over our animality, ever more nearly approached though incapable of being completely realized. This is the character and tendency of human development, or of what is called civilization; and the obligation of seconding this movement—of working in the direction of it—is the nearest approach which M. Comte makes in this treatise to a general principle or standard of morality.

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* 'Indeed his claim to be the creator of Sociology does not extend to this branch of the science; on the contrary, he, in a subsequent work, expressly declares that the real founder of it was Aristotle, by whom the theory of the conditions of social existence was carried as far towards perfection as was possible in the absence of any theory of Progress. Without going quite this length, we think it hardly possible to appreciate too highly the merit of those early efforts, beyond which little progress had been made, until a very recent period, either in ethical or in political science.'

'But as our more eminent, and peculiarly human, faculties are of various orders, moral, intellectual, and æsthetic, the question presents itself, Is there any one of these whose development is the predominant agency in the evolution of our species? According to M. Comte, the main agent in the progress of mankind is their intellectual development. Not because the intellectual is the most powerful part of our nature, for, limited to its inherent strength, it is one of the weakest: but because it is the guiding part, and acts not with its own strength alone, but with the united force of all parts of our nature which it can draw after it. In a social state the feelings and propensities cannot act with their full power, in a determinate direction, unless the speculative intellect places itself at their head. The passions are, in the individual man, a more energetic power than a mere intellectual conviction; but the passions tend to divide, not to unite, mankind: it is only by a common belief that passions are brought to work together, and become a collective force instead of forces neutralizing one another. Our intelligence is first awakened by the stimulus of our animal wants and of our stronger and coarser desires; and these for a long time almost exclusively determine the direction in which our intelligence shall work: but once roused to activity, it assumes more and more the management of the operations of which stronger impulses are the prompters, and constrains them to follow its lead, not by its own strength, but because, in the play of antagonistic forces, the path it points out is (in scientific phraseology) the direction of least resistance. Personal interests and feelings, in the social state, can only obtain the maximum of satisfaction by means of co-operation, and the necessary condition of co-operation is a common belief. All human society, consequently, is grounded on a system of fundamental opinions, which only the speculative faculty can provide, and which, when provided, directs our other impulses in their mode of seeking their gratification. And hence the history of opinions, and of the speculative faculty, has always been the leading element in the history of mankind.'

Here we come upon the famous *loi des trois états* which has been received with great opposition from theologians and metaphysicians, whose modes of thought it sets aside as unfit for modern use; nor has it received an open welcome from men of science, whom, at first sight, it would seem most to flatter. The opposition of all the teachers now living, though it would retard, could not ultimately prevent, the reception of a law. If, therefore, Comte has really discovered a law—as many of us firmly believe—its acceptance is only a question of time. I merely note two general sources of the opposition of scientific men, both of them evils of our present condition to which Comte has frequently called attention: first, the *speciality* of most men of science, combined with the absence of large philosophical or general views; secondly, the patchwork of opinion commonly held is formed of loose floating notions of metaphysics side by side with theological dogmas and inductive generalisations, so that many a mind which has discarded theological and metaphysical explanations of physical and even biological phenomena, readmits them into Psychology or Sociology. To these causes of opposition must also be added the license men permit themselves of pronouncing confidently on questions they have not taken the preliminary trouble of understanding. Two-thirds of the objections urged against this law of the three stages are based on a radical misapprehension of it; and there is something quite comic in the gravity with which these misconceptions are advanced.

The law does not assert that at distinct historical periods men were successively in each of the three stages, that there was a time when a nation or even a tribe was exclusively theological, exclusively metaphysical, or exclusively positive; it asserts that the chief conceptions man frames respecting the world, himself, and society, must pass through three stages, with varying velocity under various social conditions, but in unvarying order. Any one individual mind, inheriting the results of preceding generations, may indeed commence its thinking on some special topic, without being forced to pass through the stages which its predecessors have passed through; but every class of conceptions must pass through the stages, and every individual mind must more or less rapidly, in the course of its evolution from infancy to maturity, pass through them. These necessary stages Comte names the theological, the metaphysical, and the positive. Mr. Mill suggests, as less ambiguous, the terms volitional, abstractional, and experiential. The first is the spontaneous and primitive condition of thought; the second is a transition to the third, which is final.

All men are agreed, in these days, that real knowledge must be founded on observation. But no science could have its origin in simple observation alone; for if, on the one hand, all theories must be founded on observation, on the other, it is equally necessary to have some sort of theory before we address ourselves to the task of steady observation. If, in contemplating phenomena, we do not connect them by some principle, it would not only be impossible for us to combine our isolated observations, and consequently to draw any benefit from them; but we should also be unable even to retain them, and most frequently the important facts would remain unperceived. We are consequently forced to theorise. A theory is necessary to observation, and a correct theory to correct observation.

This double necessity imposed upon the mind—of observation for the formation of a theory, and of a theory for the practice of observation—would have caused it to move in a circle if nature had not fortunately provided an outlet in the spontaneous activity of the mind. Owing to this activity, it begins by assuming a cause, which it seeks outside the phenomena, i.e. a *super*natural cause. As man is conscious that he acts according as he wills, so he naturally concludes that everything acts in accordance with some will.

The spontaneous tendency is to animate the external world, because, since knowledge can only proceed from what is already known, the analogies suggested by consciousness are inevitably the first explanations of cosmical phenomena. This is the state of Fetichism: a state still to be noticed among children and savages. It passes by insensible degrees into Polytheism; and that again by a supreme effort of abstraction is replaced by Monotheism.

The second, or metaphysical, stage was a transition from this primitive stage to the final stage of positivism. It replaced the supernatural agent of the theological conception by a natural agent inherent in the objects themselves. It replaced the variable action of a *will*, for the invariable action of an *essential cause*. In lieu of deities, it imagined entities.

Criticism subsequently discovered that these entities were simply personified abstractions. They then fell into such discredit that nowadays there may be some difficulty in comprehending how men of keen and meditative intellects could ever have mistaken abstractions for real existences capable of causing all the changes observed; yet nothing is more certain, and this History has exhibited abundant examples of the mistake. Not only so, but many moderns who find it difficult to conceive that the great minds of the past could so far confound the names they gave to certain classes of facts with the essential causes of the facts themselves—could rely on an explanation which was in truth only a restatement of the facts to be explained—could passionately maintain that over and above the existing animals, which they saw, there existed an universal Animal, which they did not see, and that this Animal was the reality of which the individual animals were the passing shadows—many moderns who find this difficult to conceive are themselves so wedded to similar abstractions (that of a

Vital Principle, for example) that they despise you as 'shallow,' or declaim against you as 'materialistic,' if you think otherwise.

In the final, or positive, stage, the mind relinquishes attempts to penetrate into the essence of things, to transcend the sphere of Experience, and pass into that of causes, first or final. Its aim is to explain the *how*, and leave unexplored the *why*. It desires to establish by observation and induction the Laws, or constant relations, and resigns itself to ignorance of the Agents.

One illustration must suffice here.* Men formerly believed, according to Oersted, that Basilisks lived in cellars which had long been shut up; they were invisible, and whomsoever they looked upon died. This is a typical specimen of the theological mode of explanation. I am not aware what metaphysical one replaced it, but in the spirit of that method I will suggest the following: *Cellarity*, when long pent up, is inimical to Life. The positive explanation, seeking in the known properties of things, discovers a deleterious gas, whose weight causes it to accumulate in low places unless driven away by supplies of fresh air, and this gas is a poison to anyone who breathes it.

The theological system arrived at the highest perfection of which it is capable when it substituted the providential action of a single Being for the varied operations of the numerous divinities which had been before imagined. In the same way, in the last stage of the metaphysical system, men substitute one great Entity (Nature) as the cause of all phenomena instead of the multitude of Entities at first supposed. In the same way, again, the ultimate perfection of the positive system would be to represent all phenomena as particular aspects of a single general fact—and to this the molecular theory seems now rapidly tending.

After this brief indication of the law, we may resume Mr. Mill's exposition:—

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* In my work on *Aristotle*, pp. 26–34, the law of the three stages is variously illustrated.

'The passage of mankind through these stages, including the successive modifications of the theological conception by the rising influence of the other two, is, to M. Comte's mind, the most decisive fact in the evolution of humanity. Simultaneously, however, there has been going on throughout history a parallel movement in the purely temporal department of things, consisting of the gradual decline of the military mode of life (originally the chief occupation of all freemen) and its replacement by the industrial. M. Comte maintains that there is a necessary connection and interdependence between this historical sequence and the other; and he easily shows that the progress of industry and that of positive science are correlative; man's power to modify the facts of nature evidently depending on the knowledge he has acquired of their laws. We do not think him equally successful in showing a natural connection between the theological mode of thought and the military system of society: but since they both belong to the same age of the world—since each is, in itself, natural and inevitable, and they are together modified and together undermined by the same cause, the progress of science and industry, M. Comte is justified in considering them as linked together, and the movement by which mankind emerge from them as a single evolution.

'These propositions having been laid down as the first principles of social dynamics, M. Comte proceeds to verify and apply them by a connected view of universal history. This survey nearly fills two large volumes, above a third of the work, in all of which there is scarcely a sentence that does not add an idea. We regard it as by far his greatest achievement, except his review of the sciences, and in some respects more striking even than that. We wish it were practicable in the compass of an essay like the present to give even a faint conception of the extraordinary merits of this historical analysis. It must be read to be appreciated. Whoever disbelieves that the philosophy of history can be made a science should suspend his judgment until he has read these volumes of M. Comte. We do not affirm that they would certainly change his opinion; but we would strongly advise him to give them a chance.'

It is now needful to consider whether Comte may rightfully be claimed as having created Social Science, or only, as Mr. Mill thinks, having rendered such a creation possible. To do this, we must first settle what is meant by the creation of a science. There is, I believe, only a difference in terms between Mr. Mill's position and my own; he would say that the defects in Comte's construction prevent it from being accepted as a science, though the route is opened for future investigators, and much of the country is mapped out. Admitting the defects to be as great as he supposes, though I think on some points a good defence may be made, I should only look on these *as* defects. No science is perfect, and the last and most complex of them all is, of course, the most defective of them all. What we have to consider is whether it is a science, and whether it is in such condition that, like all other sciences, it may indefinitely advance. We have seen that in the absence of Sociology the creation of the Positive Philosophy would have been impossible, since, then, *all* phenomena would not have been embraced; we have seen, further, that it was not only necessary that social phenomena should be included with cosmical phenomena in the Doctrine, but that these social phenomena should disclose their elementary laws: in other words, that Sociology should not only be a science but an Abstract Science. I will now endeavour to show that Comte transformed what before was Common Knowledge into Science, separated its elements from those of other sciences, and presented the Abstract Science of social existence claiming its place in the hierarchy.

Others before Comte, as Mr. Mill remarks, had a full conviction that social phenomena conform to invariable laws, and by discarding all theological and metaphysical explanations had adopted the positive attitude. Granted; but the positive attitude is not enough for Science; and no one will venture to assert that Montesquieu, Macchiavelli, Adam Smith, Bentham, or the political economists, had discovered the fundamental laws which constitute the science. They had not even distinctly conceived how the science itself should be distributed into statical and dynamical laws, the statical derived from Biology, the dynamical from History. They made several empirical generalisations, valuable as such, but made no attempt to organise these into a science.

The universal mistake of social speculators was an attempt to deduce the phenomena from the laws of 'human nature,' i.e. to make collective phenomena the simple consequences of laws of the individual. Setting aside the metaphysical conceptions which were thus made a basis of deduction, and assuming that the true biological laws had been discovered and applied, we should still perceive that failure was inevitable, because social laws are not directly reducible to Biology. As Comte in one of his earliest publications remarks on this very point:—

'Sans doute, les phénomènes collectifs de l'espèce humaine reconnaissent pour dernière cause, comme ses phénomènes individuels, la nature spéciale de son organisation. Mais l'état de la civilisation humaine à chaque génération ne dépend immédiatement que de celui de la génération précédente, et ne produit immédiatement que celui de la suivante. Il est possible de suivre, avec toute la précision suffisante, cet enchaînement à partir de l'origine, en ne liant d'une manière directe chaque terme qu'au précédent et au suivant. Il serait, au contraire, absolument au-dessus des forces de notre esprit de rattacher un terme quelconque de la série au point de départ primitif, en supprimant toutes les relations intermédiaires.'* The error is as great as that of a physiologist who should attempt to deduce the state of manhood from that of infancy, without taking the state of puberty into account.

Not only did Comte see how social phenomena were to be distributed and studied in order to form a science; he saw the decisive point of separation between these and other phenomena which rendered the constitution of a separate science necessary. Precisely as Physics must be separated from Mathematics, because no extension of mathematical laws alone will suffice to explain physical phenomena; precisely as Chemistry must be separated from Physics, because in chemical phenomena there is, over and above the physical laws, the additional laws of molecular affinity; precisely as Biology must be separated from Chemistry and Physics, because by no extension of physical and chemical laws can we deduce the special laws of organic life: so in like manner must Sociology be separated from Biology, because, over and above the phenomena of human nature, exhibited in the species, there is the important series of phenomena due to the collective activities of the race. History modifies the race.

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* COMTE: *Politique positive*, tome iv. *Appendice*, p. 126; comp. also the passages pp. 98 and 130, 131.

By this conception Sociology was rendered possible, but not by this alone was the science constituted. Had Comte done no more than this, he would have held an analogous position to that of a biologist before Bichât, whom we will imagine to have conceived that Biology could be rescued from Theology and Metaphysics, and constituted as a science, if Life were reduced to the elementary properties inherent in organic tissues. Obviously this would only have been one step towards the solution of the problem; the next step would have presented immense difficulties; it would have been to determine specifically what those properties were which the several tissues specially manifested. In like manner, Comte, having conceived that the collective phenomena of History must be separated from the individual phenomena of Biology, and having withdrawn them from the *regency of volition,* to place them under the *regency of law,* showing that they depended on conditions inherent in the successive stages of society, and not on providential interventions, first made a science of History possible, and next constituted it by discovering the fundamental law of evolution.

In order that the science should be constituted, the particular phenomena had to disclose their laws; and in order that it should be an Abstract Science, it was necessary that they should disclose their elementary laws. Otherwise we might have had a History of some particular people, but not a science of universal History, an Abstract Science, the laws of which would be rigorously applicable to all nations and all times, just as the laws of Biology are applicable in all climates and in all branches of the organic series.

Mr. Mill's statement of what constitutes a science is all that Comte's disciples require, namely, 'discovering or proving and pursuing to their consequences those of its truths which are fit to form the connecting links among the rest; truths which are to it what the law of gravitation is to astronomy, and what the elementary properties of tissues are to physiology.' And this we believe the law of the three stages is to Sociology. Mr. Mill accepts that law; and therefore it is that I venture to intimate that his doubts respecting Comte's claim may be mainly a question of terms. Those—and they are the majority—who refuse to accept the law may consistently reject the claim. I cannot here afford the space for a discussion of their objections, but content myself with saying that it is a law of History, and must be verified in History; it cannot even be comprehended, much less refuted, through Psychology. Whoever will take the trouble to understand its meaning, and follow Comte's exemplification of it throughout History, will see how the superficial objections to it all disappear; as objections disappear before the law of gravitation, which likewise needed an extensive and persistent verification before its truth became irresistible.

Having thus characterised the general aspects of the New Philosophy founded by Comte, I must refrain from any attempt to follow in detail what Mr. Mill justly calls 'that wonderful systematisation of the philosophy of all the sciences, from mathematics to physiology, which, if he had done nothing else, would have stamped him in all minds competent to appreciate it, as one of the principal thinkers of the age.' There are portions, of course, which the advance of Science has rendered antiquated, and portions it has rendered unacceptable; but we shall seek in vain through the writings of his predecessors, even in special departments, for anything comparable to the solid and luminous exposition of the philosophy of each subject, and its position in human evolution. The student is advised to master and patiently meditate the successive chapters in which the philosophy of Mathematics, Physics, Chemistry, Biology, and Sociology, is expounded; and, thus fortified, he will be prepared to meet the objections which assail the Doctrine from various quarters.

Meanwhile two points imperatively demand our attention, because they are urged by a positive thinker of the highest eminence, and because they assail the integrity of the Doctrine: these are, 1st, the absence of Psychology from the hierarchy of the sciences; 2ndly, the absence of a method of Proof. Without saying where he would admit these sciences, so as to reconstruct the hierarchy, Mr. Mill insists on their omission as a defect. I am the less inclined to undervalue the force of these objections because at one time I fully accepted the first, and still waver respecting the second.

When Mr. Mill says that Comte rejected psychological observation, properly so called, as an invalid process at least in regard to intellectual operations, and that 'he gives no place in his series to the science of Psychology, and always speaks of it with contempt,' there is both truth and error in the criticism. It is true that Comte did regard internal observation as an illusory process. This is a question of Method, on which I agree with Mr. Mill in thinking Comte greatly mistaken, owing to his contempt for the only psychological investigations he was acquainted with, and to his justifiable disregard of the pretended 'œil interne.' But it is not true that Comte discarded psychological observation; he only disclaimed for it a double organ, external with regard to one class of facts, and internal with regard to another. However, it must be admitted that his ideas on this subject were not perhaps very clear, and that he had paid but little attention to the results of psychological analysis. Considering how very far professed psychologists are even yet from any definite and consistent Method, this is not a serious charge against him.

But when it is said that he gives no place to Psychology in his series, a question of Doctrine is raised, namely whether he was or was not justified in refusing to Psychology the position of an abstract and independent science? On this question I retract the adhesion which many years ago I gave to Mr. Mill's point of view, and pass over to that of Comte. It then seemed to me that on the principles of positive classification Psychology ought to be separated from Biology, just as Biology was separated from Chemistry; in each case the separation was necessitated by the *speciality* of the phenomena treated. I now see the erroneous appreciation which misled me. The confusion in my mind (let me not include others in the reproach) was the confusion of the subsidiary question of Method with the dominant question of Doctrine, and, as a consequence, an imperfect appreciation of biological phenomena. Thus because Comte was wrong respecting one of the means of psychological research (subjective analysis) and spoke with undiscriminating contempt of Psychology (meaning really nothing but the unscientific farrago about *le Moi*), and because I saw that Psychology was a possible science of great value, having a special instrument in Consciousness, I was led to dissent from him, and agree with Mr. Mill in claiming for it an independent position. Further meditation, however, disclosed that it is one thing to recognise Psychology as a science, another thing to assign it a place in the hierarchy of Abstract Sciences. It may be a Concrete Science, as Physiology and Botany are; but it is derived from the Abstract Science of Biology, and can only be consistently separated from it by those who hold that psychical phenomena are in essence distinct from vital phenomena. What I had hastily classed as special in psychical phenomena was a conventional speciality, arising from the conventional restriction of biological phenomena, and the unphilosophic practice of biologists, who had left all the higher functions to be treated by metaphysicians. That this was a serious error a moment's consideration will disclose. Biology is the science of Life; among the manifestations of living organisms we distinguish, for our convenience, the vegetal from the animal functions, what are called vital from what are called psychical phenomena; but no positive biologist supposes that this distinction is real, that an animal organism has two independent vitalities, or that the psychical functions are not part and parcel of the organic activities, determined by the structure and condition of the organs; above all no biologist supposes that his science would be complete if from the circle of vital phenomena all the sensitive, emotive, instinctive, volitional, and intellectual phenomena were excluded. The parallel between Chemistry and Biology entirely fails. Chemistry deals with the phenomena of molecular combination; the phenomena of Life are superadded to these, and this superaddition constitutes a new science. The laws of Chemistry would remain precisely what they are if all organisms were destroyed: neither more nor less. But psychological phenomena are no superaddition to the phenomena of Life, they are themselves vital; and although we may conceive a Biology restricted to Plants, and comprising only vegetal functions, this withdrawal of animal organisms would profoundly affect the constitution of Biology, by robbing it of a class of important laws. In other words, since every general science of Life necessarily includes *sensitive* no less than *nutritive* functions, any conception of Biology which excluded the sensations, instincts, and intellections would be monstrously truncated.

Comte was therefore fully justified in refusing to truncate Biology by removing from it one important class of vital phenomena; he would have erred against his own principles had he erected the concrete, derivative science of Psychology into an Abstract Science holding its place in the hierarchy.

We may cheerfully give up his views as to how Psychology should be studied, without giving up an essential element in the Positive Philosophy—without creating a place for Psychology independent of, and equivalent to, Biology. We cannot forget that all psychical phenomena are phenomena of Sensibility, and are reducible to neural processes, actions of the organism.

There is, indeed, a Philosophy which takes a very different view, teaching that sensation, emotion, ideation, are not directly functions of an organism, but are the activities of an entity living within the organism, a life within a life, having, with the organism it inhabits, only points of contact, none of community. I will not here discuss the pretensions of this Philosophy; I only say it is not the Positive Philosophy. The answer to Mr. Mill may therefore be summed up thus: either psychical phenomena are biological phenomena, in which case Psychology is a branch of Biology; or psychical phenomena are essentially different from biological phenomena—the special actions of a special agent or combination of agents—in which case Psychology claims a separate place among fundamental sciences.

Dr. Bridges,* in his letter to Mr. Mill, after noticing the restricted sense in which Comte spoke of Psychology, adds, 'If by Psychology be meant the study, by every means that are available, of the moral and intellectual functions of man, it is very certain that Comte was a psychologist, though he naturally avoided a word which connected him with a contemporary school of metaphysicians. With regard to the impossibility of studying the purely intellectual functions by the method of self-observation, Comte adopted, it is true, the opinion of Broussais so vigorously stated in his treatise *sur l'Irritation et la Folie.* It is possible that these thinkers may have rejected the method too absolutely. But it must be shown to be far more fruitful in results than it has yet proved, before it can rank very high as an instrument for the discovery of truth. The study of the intellectual and moral functions was prosecuted by Comte throughout his life, and that on methods not, I imagine, materially different from those which you would adopt.'

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* *The Unity of Comte's Life and Doctrine: A Reply to Strictures on Comte's later Writings, addressed to J. S. Mill, Esq., M.P.* By J. H. BRIDGES, M.D. 1866.

M. Littré grapples more directly with Mr. Mill's objection. He begins with an important distinction between the study of the faculties and the study of the products of those faculties. 'According to Comte there is no Psychology beyond the domain of Biology; according to Mr. Mill, Psychology forms an ensemble of notions which cannot be explained by Biology. What shall I say to this, when at the outset I remark a confusion, which I must clear up before pronouncing? The confusion is that the word Psychology sometimes comprehends the cerebral faculties and sometimes the products of those faculties. If the question is of the faculties, I side with M. Comte; if the question is of the products, I side with Mr. Mill.' He proceeds to show that whatever relates to the faculties, either as to their analysis or to their classification, everything which relates to the functions or the modifications impressed on them by external influences, belongs of right to Biology; and as such it is treated by Comte. The fact that there is a Psychology of animals decisively refutes the notion of the independence of this study of the faculties; the intelligence, affections, and instincts of animals being clearly biological questions.

'These explanations,' he adds, 'show that M. Comte committed no error in placing under Biology the study of Psychology, if by the latter we understand the intellectual and affective faculties; but if we also understand by it Ideology, and even Logic, then the reproach has quite another aspect.' M. Littré selects as an illustration of the distinction between faculties and products, the case of Language. Recent researches, he says, have given almost a demonstration of the existence of such a faculty in one of the anterior convolutions of the cerebrum. 'That is a decisive case of cerebral physiology—a definite function assigned to a definite organ; but if the faculty of Language belongs to Biology, this cannot be said of Grammar, which is a product of the faculty.' Other examples might have been added. The faculty, or faculties, of Music belong to Biology, but Counterpoint has no such place. Ideology, Logic, Ethics, Æsthetics, are products, and, as products, have no place in the series of Abstract Sciences which constitute the positive hierarchy, though one and all of them may be very important special sciences. 'Leur théorie générale n'est pas plus partie intégrante de la philosophie positive que ne le serait la théorie générale du langage et de la grammaire; et vraiment pourquoi ne pas réclamer en faveur de celle-ci, fort considérable assurément, si l'on réclame en faveur de celles-là ?'

We will now turn to the second objection. 'The philosophy of a science,' says Mr. Mill, 'consists of two principal parts; the methods of investigation and the requisites of proof.' I pause here to remark that although he is at perfect liberty to construct his own definitions, and conform to them, he is not at liberty to make them the standard for Comte, and to object to the Positive Philosophy because it does not conform to such a standard. As a critic of a system, he is bound to accept its definitions, not to apply his own. In the present instance, a positivist would say that Mr. Mill's definition is one which describes the logic, not the philosophy, of a science. I do not remember any express definition proposed by Comte, but the following is the one I should construct from his exposition: 'The philosophy of a science is constituted by the co-ordination of the fundamental Laws of the phenomena within the domain of the science — the Methods by which those Laws are discovered,—and the relation which the science bears to the one which precedes and the one which succeeds it in the encyclopædic hierarchy; in other words, its position and degree of influence in human development.'*

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* M. LITTRÉ proposes the following:—'La philosophie d'une science est la conception de cette science par co-ordination des faits généraux ou vérités fondamen-

This difference of definition being indicated, we may consider what force there is in the objection urged by Mr. Mill. He sees two requisites:—'The one,' he continues, 'points out the road by which the human intellect arrives at conclusions; the other, the mode of testing their evidence. The former, if complete, would be an Organon of Discovery; the latter, of Proof. It is to the first of these that M. Comte principally confines himself, and he treats it with a degree of perfection hitherto unrivalled. Nowhere is there anything comparable in its kind to his survey of the resources which the mind has at its disposal for investigating the laws of phenomena; the circumstances which render each of the fundamental modes of exploration suitable or unsuitable to each class of phenomena; the extensions and transformations which the process of investigation has to undergo in adapting itself to each new province of the field of study; and the especial gifts with which every one of the fundamental sciences enriches the method of positive inquiry, each science, in its turn, being the best fitted to bring to perfection one process or another. These and many other cognate subjects, such as the theory of Classification and the proper use of scientific Hypotheses, M. Comte has treated with a completeness of insight which leaves little to be desired.'

The praise is emphatic enough, and authoritative enough, to satisfy even disciples; but it is succeeded by the statement of a grave defect: 'We are taught the right way of searching for results, but when a result has been reached, how shall we know that it is true? How assure ourselves that the process has been performed correctly, and that our premises, whether consisting of generalities or of particular facts, really prove the conclusion we have grounded on them? On this question M. Comte throws no light; he supplies no test of proof. As regards deduction, he neither recognises the syllogistic system of Aristotle and his successors—the insufficiency of which is as evident as its utility is real—nor proposes any other in lieu

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tales qui y appartiennent.'—*Revue des Deux Mondes.* (This article has since been reprinted as a pamphlet: *Auguste Comte et Stuart Mill.*)

of it; and of inductions he has no canons whatever. He does not seem to admit the possibility of any general criterion, by which to decide whether a given inductive inference is correct or not. He maintains that no hypothesis is legitimate, unless it is susceptible of verification, and that none ought to be accepted as true, unless it can be shown not only that it accords with the facts, but that its falsehood would be inconsistent with them. He, therefore, needs a test of inductive proof; and, in assigning none, he seems to give up as impracticable the main problem of Logic, properly so called.'

The objection is formidable; if admitted, it would be fatal, —a system which was without a criterion would have the radical vice which dissolves every metaphysical construction. Happily this is not the case with the Positive Philosophy. A deficiency, I admit, exists, but it is not one having the reach assigned to it by Mr. Mill. A system of Philosophy must somewhere have a place for Logic, and Comte has not indicated the place it should occupy. But the omission does not deprive the system of a criterion; it only deprives us of a ready mode of exhibiting the criterion. *Logic is the codification of the rules which the various sciences have employed and must employ.* It is the grammar of science. The author of incomparably the best work on Logic is naturally alive to the importance of this codification; and we who have profited so largely by his work, are not likely to underrate it. Nevertheless, when the integrity of Positivism is in question there is doubt permissible whether the plan followed by Comte does not, as M. Littré suggests, furnish an equivalent to the legal sanction of Logic. Mr. Mill thinks not; but that may be because he misapprehends the plan:—He says, 'Method, according to M. Comte, is learnt only by seeing it in operation, and the logic of a science can only be usefully taught through the science itself.' The plan is wider: it is the combination of the hierarchy of the sciences with their methods, so that each science in turn furnishes its own criterion; thus the logic of each science is serially exhibited, and all that is wanting is the codification of the whole, an abstract science of Proof.

If Logic is the codification of the rules of experience, its utility as codification may be admitted. But the code does not introduce any new validity. It shows what the rules are; it does not furnish a test deeper than the rules themselves. Comte was not imperatively called upon to supply a test of truth more valid than experience; nor could Logic have supplied such a test. Mr. Mill declares that the final test is the universality of the law of causation. But no one has shown more conclusively that the law of causation is itself a generalisation of experience. M. Littré, therefore, asks, 'How do we know that a general proposition in science is true? By showing that in every case experience confirms it. If exceptions arise, we either sacrifice it or modify it. Our most assured inductions are only accepted under the control of constant verification, and no sanction which Logic can give them removes this relative character or adds anything to their certainty.'

Although Comte neglected to codify the rules of Proof (a neglect which has been amply remedied by Mr. Mill), he did not by any means or in any department neglect Proof. He gave the rules in giving the Methods of Research; and in this portion of the philosophy of each science he elaborated the logic peculiar to that science. As he says, 'Le vrai régime positif ne sépare jamais la logique de la science. Car en n'étudiant chaque partie de la méthode inductive qu'avec *les doctrines qui l'ont spécialement suscitée*, on sent aussitôt que son usage doit toujours être conforme aux notions fondamentales que cette science reçoit de la précédente.'*

While defending Comte, I have also to add that although Logic is to Science what Grammar is to Language, and both should be taught *pari passu* with their examples, there is still a need for a general Logic or Methodology, as for an Universal Grammar or Philosophy of Language; and this need Comte sometimes seems to have felt. 'Puisqu'il est toujours absurde,' he says, 'd'enseigner la méthode séparément de la doctrine, il faut utiliser toutes les occasions où l'on peut tirer de l'exercice scientifique une saine instruction logique.'* But where this Methodology should be placed, whether as an Abstract Science at the close of the series, or as a division of Anthropology, he has left for others to determine.

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* *Politique positive*, i. 518.

This, then, is the Positive Philosophy: the extension to *all* investigations of those methods which have been proved successful in the physical sciences—the transformation of Science into Philosophy—the condensation of all knowledge into a homogeneous body of Doctrine, capable of supplying a Faith and consequently a Polity.

The positive mode of thought is that which must rule the future. This is an induction from all History, which shows that only three modes have existed, and that they have everywhere exhibited the same law of mutation, the theological once dominant being gradually supplanted by the metaphysical, and the metaphysical in turn gradually giving way to the positive. One by one the various groups of phenomena have fallen under the positive rule, and as each group received its scientific character it freed itself more and more from the influence of Theology or Metaphysics, the perfection of each science being accurately measured by the completeness with which these influences have been eliminated.

But although the course of History unequivocally consecrates the Positive Philosophy, and although we see in the ever accelerated advances of Science the accumulative preparation for the new Doctrine, we must not confound the general spirit with the special result. We may accept the positive spirit, and all the positive sciences, without accepting the Philosophy which Comte has evolved from them. I myself accept that Philosophy, and I do not know of any other general Doctrine which is to be placed beside it. But there are many positive thinkers who either do not feel the need of a Doctrine, or do not see how at present it is to be constructed; men who think that the several sciences are enough, without a general Philosophy to knit them together; and men who are dissatisfied with Comte's synthesis, though unable to propose a better. Thus it is that there is still a vast mass of unorganised positivism which the future will have to organise. What may be said at once of the Philosophy is that it *is* a systematisation, more or less perfect, of actual knowledge, a general doctrine capable of embracing all knowledge. This is its distinctive character. 'Tant qu'Auguste Comte n'a pas paru,' says M. Littré, 'le champ de la spéculation générale appartient à la théologie ou à la métaphysique, et celui de la spéculation particulière à la science. Quand il a paru, les positions sont interverties; la spéculation scientifique devient générale, et la théologie et la métaphysique deviennent particulières, c'est-à-dire, qu'elles ne se montrent que comme des étages de l'histoire de l'esprit humain.'*

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* *Politique positive*, ii. 443.

More than once the phrase 'systematisation of all knowledge' has been used, and used designedly; for the province of Positivism is strictly limited to what can be known; and it is this very circumscription which has provoked the deepest antagonism. Affirming that since we cannot *know* the origins and ends of things—first and final causes being, from the constitution of our faculties, inaccessible to us—we ought stringently to exclude them from our Philosophy, which is concerned solely with what can be known, Positivism by no means denies the existence of such causes, it simply denies that by invoking the mere existence we can gain any insight into the laws of phenomena. Neither affirming nor denying their existence, it contents itself with asserting that these causes have not been made cognisable to our minds; and although it is permissible to every man to indulge in any phantasies he pleases, it is not permissible to introduce these into Philosophy. It is no use asking for better bread than can be made of wheat. The limitations of human knowledge may be irksome to some impatient spirits—and are usually so to those who have not had patience enough to master much of what *is* known—but Philosophy pretending to no wider sweep than that of human faculty, and contented with the certainties of experience, declares the search after first and final causes to be a profitless pursuit.

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* LITTRÉ: *Auguste Comte*, p. 99.

§ III. TRANSFORMATION OF PHILOSOPHY INTO RELIGION.

It is neither consistent with the plan of this History, nor with the few pages still at my disposal, to give an exposition of the speculations which Comte produced during his second period. That his Philosophy rapidly became transformed into Religion, has already been noticed; also that the transformation caused a schism among his disciples, one party affirming that he had forsaken the positive Method, and was untrue to his own teaching; the other party affirming that the later developments were perfectly consistent with the earlier speculations, and that his whole life had been the one work of founding a Polity on the basis of a demonstrated Faith.*

The later works, namely the *Politique*, the *Catéchisme*, and the *Synthèse subjective*, form a group by themselves, which, whether they are, or are not, necessary developments of the Philosophy, in nowise affect the integrity of that system of thought; a system that may be accepted by those who do not feel the need of the Religion, and by those who do not think that Comte has succeeded in the transformation. There are thus two separable doctrines associated with his name; the fervent adherents of the one being sometimes only partial adherents of the other, and sometimes even its open antagonists.

Such questions must be debated elsewhere. For myself I will only say that in spite of my veneration for Comte, and my growing sympathy with his views, I have never been able to accept the later works as more than magnificent efforts to construct an Utopia, which differs from all previous Utopias in having the past life of Humanity as its warrant. I think his attempt at systematisation was premature: failure was inevitable, because polities must grow, they cannot be made—and by him the laws of growth were disregarded. It was not thus in his early days; indeed, when writing to Valat he declares that the object of his philosophy is to reform the whole system of Education, and that until the Doctrine is completely established, every attempt to change the existing form of government should be carefully avoided. But in his later days this was forgotten. The Method he employed is one which the Positive Philosophy emphatically condemns; and his large use of subjective fiction, though permissible in an Utopia, is disastrous elsewhere. He painfully illustrates his own Law of the Three Stages, according to which the same mind may be in the positive stage when handling some topics, and in the metaphysical stage when handling others. No metaphysician ever constructed a scheme of the Cosmos with more arbitrary conceptions, and a greater disregard of experience than Comte employs in the construction of his Polity. Not only does he perpetually disregard experience, and verifiable data, but he is sometimes flagrantly at variance with them, and propounds hypotheses that are as wild as the fictions of poets. On these grounds of Method and premature systematisation, I am forced to separate myself from him, to question some doctrines and reject others, which, if they were put forth merely as suggestions, might be fertile in influence. Generally it may be said of these later works that had they been avowed as Utopian—as the visions and suggestions of a meditative mind anxious to impart to others the thoughts which rose in it—their immediate operation would have been incomparably greater, because their profoundly moral and ennobling spirit, and their reach of suggestion, would have gained the sympathy of many who are roused to antagonism by what they consider the arrogance of a claim to finality, and the danger of an attempt at practical enforcement of ideas not rationally sifted. It is one thing to listen to a philosophic proposal, to carry it in our thoughts and see how far it will clear up difficulties, how far it is or is not compatible with experience; another thing to listen to a preacher who propounds his visions as laws. As a great teacher, Comte's simple indications would have been received with the respect which was their due. As a pontiff, he forced us to scrutinise severely the validity of every proposition he put forth. We could all admit the deep importance of his efforts to exalt every demonstrated truth into an element of Religion, making all studies religious by disclosing their higher aim, so that even Mathematics might become a part of Morality; we could see that he was thus calling on us to do consciously what from the first mankind has been doing unconsciously, namely, to make every insight into the truth of things a rule of conduct. But the very principle here in operation teaches a cautious reserve. We must be thoroughly convinced of a truth before we erect it into a rule of conduct. Now it is certain that many of Comte's ideas, even on fundamental questions, are very far from having the evidence requisite for conviction; and however grateful we may be to him for his suggestions, we are by no means ready to regard them as laws.

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* Contrast LITTRÉ's work on Comte, and Dr. BRIDGES' *Letter to J. S. Mill.*

Thus much it was needful to say respecting the attitude of many who on the whole regard Comte's later speculations with sympathy, as the efforts of an individual to anticipate the work of future generations. The history of his ideas he has narrated in the preface to the first volume of the *Politique*; and although it may be somewhat coloured by the after glow, its substantial truth will be recognised by all who read his early essays, or meditate the first and final chapters of the *Philosophie*. Nothing can be more evident than that from the first his aim was to construct a Polity on the basis of Science. This Polity did not at first wear the aspect of a Religion, but the transition was inevitable. A

Doctrine which furnished an explanation of the World, of Man, and of Society, which renovated education, and organised social relations, above all which established a Spiritual Power, was in all its chief functions identical with a Religion. 'Les positivistes sont aujourd'hui,' he said, 'les seuls qui, plaçant le problème spirituel avant la recherche temporelle, fondent la réorganisation industrielle sur la rénovation intellectuelle et morale. Tous les autres réformateurs s'accordent au contraire à régler immédiatement la société matérielle sans avoir aucunement discipliné les opinions et les mœurs.' The discipline of opinion is to be effected by the Philosophy which furnishes a common Faith, in furnishing a homogeneous explanation of the external order of existences; the discipline of conduct is to be effected by a religious conception of our duties. This conception of our duties naturally emerges from a consideration of the laws of social evolution, since 'l'avenir que nous voulons préparer résulte essentiellement d'un passé que nous ne pouvons changer.'

The Positive Religion claims to resume and complete all previous Religions, just as the Positive Philosophy resumes and completes all previous Philosophies. It resembles them in purpose, it differs from them in having a basis of demonstrated truth. Widely as the various creeds may be separated, they are essentially combined by Positivism, which considers each in reference to its local and temporary destination, as the expression of one stage of human evolution. 'Il n'existe au fond qu'une seule religion à la fois universelle et définitive, vers laquelle tendirent de plus en plus les synthèses partielles et provisoires, autant que le comportaient les situations correspondantes.' No sooner was the religion of Humanity distinctly conceived than the history of Religion seemed suddenly illuminated, as the story of one aim becoming more and more definite: everywhere the same tendency was observable: everywhere the ideal of *human* nature usurping more and more of the province primitively assigned to supernatural powers: the gods, always exaggerations of human powers and passions, became more and more personifications of what was most admirable and loveable in human nature, till, in Christianity, there emerged the avowed Ideal Man.

It is therefore an ungenerous and misplaced reproach so often sneeringly cast upon Comte that he has enriched his religion by incorporating largely the elements of Christianity. It is because Christianity was the highest and latest development of religious thought, and because it brought into preeminence the human element contained in all religions, that it was the effectual preparation for a religion of Humanity. Comte therefore, whose aim it was to extricate from the whole past experience of the race whatever was in harmony with the development of our higher nature, could not but largely incorporate Christian teaching in his own synthesis. And thus it is that apart from certain metaphysical doctrines—very lightly held by most minds—there is little in the conceptions of the most enlightened Christian which is not identical with Positivism; or, conversely, there is little in Positivism which Christians do not or cannot cordially accept in all that relates to this life. The main distinction lies in this, that Positivism leaves less influence to the avowedly selfish motives.

Unhappily Comte did not confine himself to preaching a noble moral doctrine, but irritated his antagonists and perplexed his admirers by a variety of particular prescriptions, which gratified his love of systematization. These are regarded as absurd or worse; and the public ever ready to fasten upon details and to neglect essentials, quarrel over these particular prescriptions, declaim against them, and laugh at them, as if the Religion of Humanity meant nothing more. It is the spectacle constantly before our eyes when in the squabbles about Ritualism, men forget that they are Christians.

Two things every Religion must do if it is to endure: it must satisfy the intellect, and regulate the feelings. To satisfy the intellect, it must furnish an explanation of the World and Society such as enables us to understand, and by understanding to modify, the External Order to which our existence is subordinate. To regulate the feelings, it must furnish an explanation of Man, such as enables us to understand, and, by understanding, adapt ourselves to the Internal Order which constitutes the moral life. How far Positivism at present answers to such demands is a matter for debate. That it claims to answer them is enough to arrest serious attention. So much is clear: that whenever the present intellectual anarchy is replaced by a common Faith, whenever men have a system of beliefs respecting the universe and their relation to it, which resting on demonstration admits of no dispute, then—alas! the prospect seems far distant—will arise a Polity which also will admit of no dissent. Then will Philosophy be transformed into Religion.

Meanwhile anarchy continues, and the Faith is slow in spreading.

THE PRESENT CONDITION OF PHILOSOPHY.

HITHERTO the History of Philosophy has been that of a long period of preparation. A new era dawns with the transformation of Science into Philosophy. Henceforward History will record development, not revolution—convergence of effort, not conflict. Each science has had its period of preparation, during which knowledge was accumulated, but no presiding conceptions gave unity to researches, no fixed methods enabled all men to assist in building one temple. Then came the change: each science was 'constituted,' separated from Common Knowledge, and the efforts of all labourers were convergent, the development was continuous. The constitution of the Positive Philosophy closes the period of preparation, and opens the period of evolution. This system is distinguished from all philosophical systems hitherto propounded in that it accepts from the special sciences the Methods they have employed and the Results they have attained, thus presenting an expression and summary of the whole of human effort: instead of following the old plan of constructing a system and then applying its Method and Results to the special inquiries of the sciences. It is far, very far from complete as a Doctrine. It will have to undergo many enlargements and modifications, advancing with the progress of discovery, and adapting itself flexibly to all the changes of scientific knowledge. But while it will thus need and will absorb the labours of future generations, it will continue in the same path, undisturbed by conflicts of principles.

This prophecy is not made in forgetfulness of the fact that at present the Doctrine has no very extensive acceptance, and that even positive thinkers are not always willing to accept it. Hipparchus and Bichât found lukewarm adherents among the astronomers and biologists of their day, and fierce antagonists among the philosophers; but the rolling years brought light into men's minds; and the Positive Philosophy will force its way to empire, in spite of sceptics and opponents. It must do so, because its only rivals are Theological Philosophy and Metaphysical Philosophy, and these, after a long reign, have irretrievably lost their supremacy in every department where they have been confronted with Science. No sooner was victorious Science transformed into a Philosophy than the rivalry was virtually at an end. Thus, although Comte may come to be as antiquated as Hipparchus, and as far behind the knowledge of the day as Bichât now is, the Positive Philosophy will henceforth reign undisturbed.

In the story which these pages have told, there has been something like a demonstration of the incompetence of the Method upon which all metaphysical inquiries proceed. The urgent need of the Positive Philosophy was thus made apparent. If the Past points to the necessity for a homogeneous and all-embracing Doctrine, what indications are there in the Present of a speedy realisation of that aim? To answer this question, a volume might profitably be employed. In the few pages still at command, I can only briefly touch on it.

In France, at first sight, the signs seem unfavourable, since what little speculative activity exists there (out of Science) is markedly opposed to the positive spirit. The reaction against the 18th century still continues, and 'Materialism' is still the bugbear erected to warn men away from positive tendencies. In Germany, on the other hand, the old spiritualism is daily falling into discredit, and what are called materialistic opinions are rising into popularity. Nay, even, in England there is no mistaking the strong current towards positive ideas, in spite of our theological impatience of whatever can be stigmatised as Materialism.

Materialism is an ugly word, which *connotes* certain opinions of very questionable validity held by some writers, and opinions both silly and immoral which are wantonly *attributed* to these writers by rash and reckless polemists. Be their opinions, however, what they may, the materialists have at least this important advantage, that they strive to get rid of all metaphysical entities, and seek an explanation of phenomena in the laws of phenomena. Their doctrine may be, as I think it is, truncated and imperfect; words and vague generalities are too often made to supply the place of distinct conceptions; but the opinions should be refuted as false, not denounced as dangerous. Research is arduous enough without our obstructing the path with bugbears. If materialistic opinions are erroneous, they are dangerous to the extent of their erroneousness; whereas most men declare these opinions to be erroneous because they believe them to be dangerous. Against this mode of warfare philosophers are bound to protest. It is an effective mode, and therefore should be condemned. Men may, unhappily, be frightened from the truth and cajoled into error; * and in France the cajolery has been openly avowed, Victor Cousin frankly appealing to the 'patriotism' of his audience in favour of 'nos belles doctrines.'

The reaction against the Philosophy of the Eighteenth Century was less a reaction against a doctrine proved to be incompetent than against a doctrine believed to be the source of frightful immorality. The reaction was vigorous, because it was animated by the horror which agitated Europe at the excesses of the French Revolution. Associated in men's minds with the saturnalia of the Terror, the philosophical opinions of Condillac, Diderot, and Cabanis were held responsible for the crimes of the Convention; and what might be true in those opinions was flung aside with what was false, without discrimination, without analysis, in fierce impetuous disgust. Every opinion which had what was called 'a taint of materialism,' or seemed to point in that direction, was denounced as an opinion necessarily leading to the destruction of all Religion, Morality, and Government. Every opinion which seemed to point in the direction of spiritualism was eagerly welcomed, promulgated, and lauded; not because it was demonstrably true, but because it was supposed capable of preserving social order. And indeed when, looking back upon those times, we contemplate the misery and anarchy which disgraced what was an inevitable movement, and dimmed what was really noble in the movement, we can understand how many generous hearts and minds, fluctuating in perplexity, did instinctively revolt not only against the Revolution, but against all the principles which were ever invoked by the revolutionists. Looking at the matter from this distance we can see clearly enough that 'Materialism' had really no more to do with the Revolution than Christianity had to do with the hideous scenes in which the Anabaptists were actors; but we can understand how indelible was the association of Revolution with Materialism in the minds of that generation.

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* M. TAINE, in one of his vivacious sallies, notices the small importance the public attaches to pure reasoning: 'Attaquez une psychologie par une psychologie; vous convaincrez quatre ou cinq esprits solitaires, mais la foule vous échappera. Au contraire, proclamez bien haut que si l'on continue à croire vos adversaires, Dieu, la vérité, la morale publique sont en danger; aussitôt l'auditoire dressera les oreilles: les propriétaires s'inquiéteront pour leur bien, les fonctionnaires pour leur place; on regardera les philosophes dénoncés avec défiance; par provision on ôtera leur livre des mains des enfants; le père de famille ne laissera plus manier à son fils un poison probable.'—*Les Philosophes français du XIXième Siècle*, p. 5.

So profoundly influential has this association been, that a celebrated surgeon of our own day perilled his position by advocating the opinion, now almost universally accepted, but then generally shuddered at, that the brain is the 'organ' of the mind. He had to retract that opinion, which the pious Hartley and many others had advanced without offence. He had to retract it, not because it was scientifically untenable, but because it was declared to be morally dangerous.

The history of the reaction in France is very instructive, but it would require more space than can here be given adequately to narrate the story.* Four streams of influence converged into one, all starting from the same source, namely, horror at the Revolutionary excesses. The Catholics, with the great Joseph de Maistre and M. de Bonald at their head, appealed to the religious sentiments; the Royalists, with Chateaubriand and Madame de Staël, appealed to the monarchical and literary sentiments; the metaphysicians, with Laromiguière and Maine de Biran, and the moralists with Royer-Collard, one and all attacked the weak points of Sensationalism, and prepared the way for the enthusiastic reception of the Scotch and German philosophies. A glance at almost any of these writers will suffice to convince the student that their main purpose is to defend morality and order, which they believe to be necessarily imperilled by the philosophy they attack. The appeals to the prejudices and sentiments are incessant. Eloquence is made to supply the deficiencies of argument; emotion takes the place of demonstration. The hearer is charmed, roused, dazzled. He learns to associate all the nobler sentiments with spiritualistic doctrines, and all grovelling ideas with materialistic doctrines; till the one school becomes inseparably linked in his mind with emotions of reverence for whatever is lofty, profound, and noble, and the other with emotions of contempt for whatever is shallow and unworthy. The leaders of the reaction were men of splendid talents, and their work was emimently successful. But now that the heats of controversy have cooled, and all these debates have become historical, we who look at them from a distance can find in them no philosophical progress, no new elements added which could assist the evolution of Philosophy, and form a broader basis for future monuments. In political and literary history these attempts would claim a conspicuous position; in the History of Philosophy they deserve mention only as having made mankind aware of the limited nature of the eighteenth-century philosophy, and its extraordinary *lacunæ*. Their office was critical, and has been fulfilled.

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* The reader may consult on this topic DAMIRON, *Essai sur l'Histoire de la Philosophie en France au XIXième Siècle*; TAINE, *Les Philosophes français du XIXième Siècle*; and RAVAISSON, *Rapport sur la Philosophie en France au XIXième Siècle.*

One doctrine, and one alone, emerged from these attempts, and held for some time the position of a School. It made a noise in its day, but even the echoes have now become almost inaudible. A feebler doctrine scarcely ever obtained acquiescence; we must nevertheless bestow a few sentences on it to make our story complete. Eclecticism is dead, but it produced some good results, if only by the impetus it gave to historical research, and by the confirmation it gave, in its very weakness, to the conclusion that an *à priori* solution of transcendental problems is impossible. For Eclecticism was the last product of philosophical speculation, the gathering together of all that philosophers had achieved, and the evolution from these separate achievements of one final doctrine,—which final doctrine is itself rejected.

Victor Cousin and Thomas Jouffroy are the chiefs of this School: one a brilliant rhetorician utterly destitute of originality, the other a sincere thinker, whose merits have been thrown into the shade by his brilliant colleague. As a man of letters, M. Cousin deserves the respect which attends his name, if we except the more than questionable use which he has made of the labours of pupils and assistants without acknowledgment. However, our business is not with Cousin, but with Eclecticism. Royer-Collard introduced the principles of the Scotch school, to combat with them the principles of Sensationalism. Reid and Stewart were translated by Jouffroy, explained and developed by Royer-Collard, Jouffroy, and Cousin. The talents of these professors, aided by the tendency towards any reaction, made the Scotch philosophy dominant in France. But Victor Cousin's restless activity led him to the study of Kant:—and certain doctrines of the 'Königsberg sage' were preached by him with the same ardour as that which he had formerly devoted to the Scotch. As soon as the Parisians began to know something of Kant, M. Cousin started off to Alexandria for a doctrine: he found one in Proclus. He edited Proclus; lectured on him; borrowed some of his ideas, and would have set him on the throne of philosophy, had the public been willing. A trip to Germany made him acquainted with the modern Proclus—Hegel. On his return to Paris he presented the public with as much of Hegel's doctrines as he could understand. His celebrated Eclecticism is nothing but a misconception of Hegel's *History of Philosophy*, fenced round with several plausible arguments.

Gifted with great oratorical power, flattering the prejudices and passion of the majority, tempted as most orators are to sacrifice everything to effect, and incapable, from native incapacity or from defective training, of gaining any clear insight, Victor Cousin by his qualities and defects rose to an eminence which was regrettable, because it overshadowed the efforts of nobler minds. He was the source of philosophical patronage, and he filled the chairs of France with professors who were his adherents, or who dared not openly expose his weakness. The consequence was, that, being crassly ignorant of Science, he kept Philosophy aloof from all scientific influences. The progress of centuries was ignored, and the methods of Scholasticism were once more brought into vogue. A painful cant of 'question begging' eloquence supplied the place of research. The clear, precise genius of France was for a time ashamed of its clearness, and in sheer terror of being thought superficial and immoral rejected the aid of Science, and went maundering on about *le Moi, l'Œil interne, l'Infini, le Vrai, le Beau, et le Bien* in a pitiable manner.

Among the productions of late years which deserve serious attention, may be named the two works of M. Cournot, the Logic of M. Delbœuf, and the Essays of M. Renouvier.* The most remarkable of all the recent productions, is undoubtedly the work of M. Taine,† wherein he has resumed with French clearness and his own felicity of style, some of the best established results of psychological research in England and Germany, uniting Mill, Bain, and Spencer, with Herbart, Helmholtz, and Wundt. It is indeed a matter of surprise to see how, after following these leaders through the greater part of his work, he endeavours at the close to adopt Hegel's principles, and present them as a basis for a future Metaphysic. But whether the reader agree or disagree with the views M. Taine puts forth, he will be interested throughout, and always stimulated to re-investigation of the problems.

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* COURNOT: *Essai sur les fondements de nos Connaissances*, 2 vols. 1851; and *Traitè de l'enchaînement des Idèes fondamentales dans les sciences et dans l'histoire*, 2 vols. 1861; DELBŒUF: *Essai de Logique scientifique*, 1865; RENOUVIER: *Essais de Critique gènèrale*, 1854.

† TAINE: *De l'Intelligence*, 2 vols. 1870.

In Italy the philosophic activity is almost exclusively metaphysical, and mainly directed by Theology. There is a centre of Hegelianism at Naples, of which M. Vera is the leader; and a small section of reactionists against all Theology, of which Signor Franchi may be regarded as the type.* But I only know one philosophic work that has any positive tendency, and that is the very remarkable treatise by the Padre Secchi of Rome,† which no one interested in the modern doctrine of the correlation of the Physical Forces should neglect. A sketch of the present state of philosophy has been given by Signor Ferrari,‡ but I cannot speak as to its value.

In Germany, so long the home of Metaphysics, the movement has for some time past been decidedly towards positivism. 'The fall of Hegelianism,' says Haym, 'is connected with the sense of deadness generally in philosophy.'§ How could it be otherwise? So great a failure of such exulting hopes, necessarily led to a despair of speculation. The majority turned impatiently away from researches which landed every one in Scepticism or Absurdity, and gave their attention to Science, which promised less, but fulfilled so much more. There was, and is still, a small minority unwilling to relinquish Speculation. Nor can they be blamed.

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* Franchi: *La Filosofia delle Scuole Italiane.* 1863.

† Secchi: *L'Unità delle Forze fisiche; saggio di filosofia naturale.* 1864.

‡ Ferrari: *Essai sur l'Histoire de la Phil. en Italie au XIXième Siècle*, 2 vols. 1869.

§ Haym: *Hegel und seine Zeit*, p. 5.

If Speculation manifestly failed, the causes of its failure have not been adequately revealed; and hence there are still ardent soldiers ready again and again to join the forlorn hope. Not seeing that the method of Metaphysics is one on which no certainty can be reached, the seekers continue on the old path instead of trying a new path; they retrace the steps of their predecessors to discover, if possible, some bye-path that had been overlooked. This explains the revival of interest in Kant, Herbart, Schopenhauer, and Leibnitz. Unlike Science, which never returns upon a refuted error, never reoccupies abandoned positions, Metaphysic naturally returns to its forsaken idols, burning fresh incense on their altars. Not being verifiable, Metaphysic is not refutable. Observe, moreover, that whereas Science is cosmopolitan, Metaphysic is national. It would be ridiculous to speak of English Astronomy, German Physiology, Italian Physics, or French Chemistry, except as illustrating the state of these cosmopolitan sciences in the several countries; and a work on one of these sciences that was not intelligible in all countries, an experiment that was only valid in France, and not in England, Germany, and Italy, would be at once put out of court. Not so with Metaphysical Philosophy. The Germans boast that they, and they alone, possess a philosophy; and it is true that we can speak of *German* Philosophy, as we speak of Chinese Religion, the dogmas and rites of which are to other nations unintelligible or absurd. Only by dint of patient preparation can the most philosophical Englishman, Frenchman, or Italian, understand German philosophy; its terminology, its maxims, its assumptions, its proofs, lie remote from the sphere of his thoughts. On the other hand, the German regards with undisguised contempt the efforts of all other nations. He considers that he has a Calculus where others have only a Multiplication Table.

Nevertheless it is as I said; Germany is awakening to the conviction that Science must displace Metaphysic. Ontology finds few cultivators, and Psychology calls itself a *Naturwissenschaft*, and very strenuously seeks to discover the organic mechanism of thought.* The break up of the Hegelian school was coincident with the popularity of the Herbartian, or what may be called the school of mathematical metaphysicians; and the disciples have mainly distinguished themselves by their assaults on the *à priori* Method, the destruction of which is the necessary prelude to Positivism. Fichte the younger tells us that 'since the systems which aimed at the attainment of absolute knowledge have died out, and the Kantian maxim *that we can only comprehend truth as it stands in relation to human nature* has been reintroduced, it has become evident that all philosophical problems must be placed under the control of psychology. This is the essential character of that German speculation which has sprung up since the times of Schelling and Hegel. . . . We do not mean that any particular psychological doctrine (whether that of Kant, Fries, or Herbart) has been *finally* established, but simply that the science of the human mind and the laws of its intelligence must be made the universal starting point of philosophy.' †

If we examine the psychological writings of the day, we shall be struck with the change which has come over German Philosophy, since even the writers who are still hampered by metaphysical trammels are surprisingly eager to borrow all the aid they can from Science, while one and all see the absolute necessity of detecting in mental phenomena the determining physiological processes. And this tendency is still more visible in the outburst of Materialism which took place some eighteen years ago, recalling the old days of theological controversy.

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* Among the most remarkable works are WAITZ: *Lehrbuch der Psychologie als Naturwissenschaft*, 1849; LOTZE: *Medicinische Psychologie*, 1852; FECHNER: *Elemente der Psychophysik*, 1860; WUNDT: *Vorlesungen über die Menschen und Thierseele*, 1863; WUNDT: *Beiträge zur Theorie der Sinneswahrnehmung*, 1862; and the researches of HELMHOLTZ: *Handbuch der physiologischen Optik*, 2nd edit. 1867. Some of the results of German psychological investigations will be found lucidly presented in J. D. MORELL'S *Introduction to Mental Philosophy on the Inductive Method*, 1862.

† J. H. FICHTE: *Contributions to Mental Philosophy.* Translated by J. D. MORELL, 1860, p. 88.

In 1852, Moleschott, the physiologist, published a remarkable book, *Der Kreislauf des Lebens*, mainly directed against Liebig's physiological errors. It describes in graphic and popular style the 'circle of matter' from the mineral world to the vegetal world, and from the vegetal world to the animal, and from the animal to the psychical world. The psychical? Even so. Moleschott is a frank materialist, admitting no realities but Matter and Force, two inseparable ideas. All the phenomena of Life and Mind he relegates to the changes of Matter. In his chapter on Force, he attacks the old metaphysical conception of Force (*Kraft*) as an independent Entity, reducing it simply to the properties of Matter. As we know Matter only through its properties, and never know the properties in the absence of Matter, the conclusion is 'kein Stoff ohne Kraft, keine Kraft ohne Stoff: no Matter without Force, no Force without Matter.'

The book created an uproar. In the same year, Karl Vogt, the celebrated naturalist, published his *Bilder aus dem Thierleben*. Many who forgave Vogt's red republicanism in consideration of his researches in Embryology, especially of the salmon tribe, were startled out of their tolerance when they found him, in an essay on the souls of animals, declaring that men are only animals, and that 'thought stands in the same relation to the brain as the bile to the liver.' Of course he meant nothing so extravagant as the words imply; and he afterwards declared that his meaning simply was the meaning generally accepted respecting thought as a function of the brain. But like Proudhon's famous pistol shot—*la propriété c'est le vol*—the noise of this formula startled the world. The essay was unhappily one unworthy of such a man as Vogt: flippant and fragmentary, it could only serve to exasperate, not to convince. Nevertheless, so ready were men's minds to be stirred on this subject, that even this slight concussion hastened the general outbreak, and Rudolph Wagner (May 1853) wrote a letter to the newspapers, confessing that he discontinued the publication of his *Physiologische Briefe* because of the 'uproar and disgust' excited by his denunciation of Materialism, and by his unpopular views on the relations of Faith and Knowledge.

The uproar continued, and in 1854 Wagner declared his intention of discussing the question of a 'special soul substance' at the Göttingen Congress of physiologists. The challenge was gladly accepted by Ludwig; and Congress was alive with expectation. But Wagner was either too unwell to attend, or, as opponents aver, shrank from the discussion. At any rate it was quite clear that he would have found small support: 'The reader may form a conception of the intellectual tendencies of men of science on this question when he reflects on the fact that among five hundred persons present, not one single voice was raised in favour of the spiritualistic philosophy.' *

In the same year Wagner appealed to the wide public in an essay on Faith and Knowledge (*Glauben und Wissen*), in which he declared that in matters of Faith he thought with the poorest charcoal-burner, but in matters of Knowledge he adopted all the results of science.' Vogt was roused. He replied in a terrible pamphlet: 'The Creed of a Charcoal-burner versus Science' (*Köhlerglaube und Wissenschaft*, 1855). This was succeeded by Büchner's famous 'Matter and Force' (*Kraft und Stoff*), which rapidly ran through seven or eight editions, and was for a time the 'best abused' book in Europe. Soon afterwards came Czolbe's *Neue Darstellung des Sensualismus*, which may be called the *Système de la Nature* of the nineteenth century. I cannot here enumerate the books and pamphlets which appeared on this subject; much less give any exposition of their views. It is enough to note the fact of the conflict, because even the most considerable opponents of Materialism, such as Wagner, Lotze, and Fichte, were quite willing to discuss the question on purely scientific grounds: and if they oppose the materialist school, it was because they saw, and I think justly saw, the failure of that school to give a satisfactory solution either of cosmical or psychical problems.

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* *Deutsches Museum*, edited by PRUTZ, 1854, No. 47.

The intellectual ferment was beneficial. The materialists claimed and received a wide-spread sympathy in their efforts to root out the lingering Scholasticism, which obstructed Science, and prevented the elaboration of a true Philosophy. They were applauded also for their resistance to official orthodoxy and compromise. They pointed to the vanity of ontological systems, and called upon men to enter fearlessly on the path of objective inquiry. They popularised many of the results of Science. It was a great gain to the majority, even of scientific men, and still more of philosophers, to learn, as they learned from Dubois-Reymond* and Moleschott, that Force was not an Entity which ruled passive Matter, but that 'both were abstractions from things, each completing the other, each presupposing the other.' Force being the dynamical aspect of Matter, as Matter is the statical aspect of Force.

But while the public, impatient of Metaphysics, sympathised with this spirit, and applauded its revolutionary fervour, cautious, circumspect men of science could not but object to a rough-and-ready mode of settling intricate questions, which left all the essential difficulties untouched. They felt that only a first step had been taken in getting rid of the metaphysical entities; and that not much advantage was gained when these were replaced by mere phrases.

It is the sense of unexplained difficulties which keeps many scientific minds from adopting Materialism, even when they sympathise with the leading purpose of the materialists. We need but a more thorough application of the biological Method to disclose that the materialist view is quite as imperfect as the spiritualist view. If the hypothesis of a spirit is merely the introduction of a misleading phrase, which pretends to explain the phenomena by naming them, not less unphilosophical is the introduction of the famous formula respecting the brain as the organ of the mind, unaccompanied by any clear statement of what an 'organ' is, or what is included under the complex term 'mind.' If 'mind' is the collective name for a large group of functions, sensitive, emotive, intellective, and active, Biology must reject altogether the exclusive assignment of these functions to the brain, and must declare that to call the brain 'the organ of the mind' is about as legitimate as to call the heart 'the organ of life.' If the brain is regarded simply as one of the factors in mental manifestations, the most important it may be, then Biology demands that the mechanism be displayed, and that the cerebral processes on which mental actions depend be exhibited in some such orderly connection as that which displays the part played by the intestinal canal in digestion, or the osseous and muscular structures in locomotion. Has any one done this? No one has attempted it. Materialism is powerful in as far as it invokes the Methods of Science, and proclaims the old scholastic habits of thought unsuited to our age. The sympathy it has excited, in spite of its narrowness, is a sign of the times; and when we couple with it the visible decay of all metaphysical systems, and the visible extension of Science, we cannot doubt that in Germany also the Positive Philosophy must ere long prevail, being as it is the only system which can embrace all tendencies and furnish a homogeneous doctrine of the World, Society, and Man.

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* DUBOIS-REYMOND: *Untersuchungen über thierische Electricität*, 1848, i. 38.

Nor are the signs less hopeful in England. An impatience of Metaphysics has long existed—an impatience not always, indeed, grounded on a clear recognition of the reasons which justify it, but sustained by the observation of repeated failure on the part of Metaphysics, and of increasing success on the part of Positive Science. A painful degree of insincerity, and an uneasy alacrity in catching at any compromise which may for the nonce 'accommodate' the radically incompatible conclusions of Theology and Science, have always been, and continue to be, exhibited. Men wish to think, or wish the world to believe they think, that both Theology and Science may be true; meanwhile they steadily refuse to give up Science, and thus, at whatever cost to consistency, the tendency towards a thorough adoption of the positive point of view is manifestly growing. Metaphysic is out of court. Neither word nor thing finds favour. Ferrier's *Institutes of Metaphysics*, one of the most remarkable books of our time, is like a lonely obelisk on the broad flat plain: there are not even cairns beside it. The one great metaphysician who has formed a school, Sir William Hamilton, energetically disclaimed all the pretensions of Ontology, and devoted himself to the explanation of the conditions of knowledge. His influence, aided by that of Mr. Mansel and others, has been purely destructive. If these distinguished writers are indisposed to adopt the positive point of view, they have at least effectively prepared for its future adoption by their demonstration of the futility of metaphysical speculation.

Turning from the Hamiltonian school to the thinker who has exercised the deepest and widest influence on our generation, Mr. Stuart Mill, we see an unmistakable illustration of the tendency of English thought to set aside theological and metaphysical explanations as no longer in harmony with present knowledge. Mr. Mill is a declared adherent of the Positive Philosophy: though not regarding that Philosophy as by any means perfect, nor disposed to accept every conclusion put forward by Comte, he has recognised the truth of the leading principles, and has largely contributed to their diffusion. It is characteristic of our condition that to the vast body of cultivated Englishmen his *Logic* has sufficed for all their instruction in Philosophy. The very celebrity of that work absolves me from further notice of it in this rapid sketch. Nor is it necessary to do more than mention his very remarkable *Examination of the Philosophy of Sir W. Hamilton*, which in many ways must help the education of our countrymen. The republication of his father's *Analysis* *of the Human Mind*, with abundant annotations by himself, Professor Bain, Mr. Grote, and Mr. Findlater (1869), has been a real service to Psychology. The clear and penetrating intellect of James Mill is shown to great advantage in this work; while many shortcomings and errors of the *Analysis* are rectified in the annotations, so as to make the book a good representative of the Association School of Psychology.

Another eminent thinker of the positive school is Professor Bain, who has restricted himself to Psychology, but whose writings display a thorough mastery of scientific Method, and a familiarity with all the sciences. In *The Senses and the Intellect* (3rd edit., 1865), in *The Emotions and the Will* (3rd edit., 1868), and in the *Logic: Inductive and Deductive* (1870), he has availed himself of much that has been discovered respecting the nervous mechanism, and has interpreted it by the light of patient psychological analysis. His pages are rich in information and suggestion. No one has more successfully exhibited the evolution of intellect even in the earliest phenomena of sensation: in Sensibility he discloses the germ of Discrimination, and in Discrimination the germ of all Cognition. Nor has anyone thrown such steady light upon the nature of voluntary movements, and the physiological process on which they depend.

It is a matter of regret to me that my space will not admit a fuller account of these works, which assuredly will mark our epoch; but I may point to one general conclusion bearing on my present argument, and it is this: The one department of inquiry still in favour which belonged of old to Metaphysics is the department of Psychology, and in this the only cultivators who have a large following are positive thinkers, namely, Professor Bain and Mr. Herbert Spencer.

The last-named writer is one daily rising into wider influence. In spite of the internecine warfare between his principles and the theological and metaphysical principles officially admitted, even antagonists are compelled to admit the force and clearness of his genius, the extent and profundity of his scientific knowledge. It is questionable whether any thinker of finer calibre has appeared in our country; although the future alone can determine the position he is to assume in History. At present he is too close to us for an accurate estimate; and, moreover, to this end his system should be before us in its entirety, whereas only two parts—*First Principles* (1862) and *The Principles of Biology* (1864–7) and the first volume of the *Principles of Psychology*—have as yet appeared.* He alone of British thinkers has organised a System of Philosophy. Seeing that he adopts the positive Method, is thoroughly imbued with the positive spirit, and constructs his system solely out of the positive sciences, one cannot but raise the question, What is his relation to the Positive Philosophy? This question becomes the more pertinent because Mr. Spencer has on several occasions expressed his dissent from Comte's views, sometimes indeed exaggerating the amount of difference in vindicating his unquestionable originality, and implying an antagonism which does not exist. Even if I thought Mr. Spencer always in the right where he opposes Comte (and I am very far from thinking so), I should still claim him as a puissant ally of the Positive Philosophy, which is something greater than Comte—being the product of all History. This Philosophy will undergo many and important modifications; the whole tendency of Molecular Physics as now cultivated is one which must finally introduce such modifications. Mr. Spencer may impress on its details important changes, but he will nevertheless no more disturb the integrity of the Positive Philosophy than Schwann by his cell-theory, or Dubois-Reymond by his discovery of the muscular currents, disturbed the integrity of Biology. Comte was the first to create that Philosophy, as Bichât created Biology: successors may gradually displace many of the provisional ideas out of which these creations were formed, but the Method and the general structure will remain unalterable.

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* Mr. SPENCER's other works are *Social Statics* (1851), *Principles of Psychology* (1855), two volumes of *Essays*, a small volume on *Education*, and a pamphlet on *The Classification of the Sciences*.

Mr. Spencer is unequivocally a positive philosopher, however he may repudiate being considered a disciple of Comte. His object is that of the Positive Philosophy—namely, the organisation into a harmonious Doctrine of all the highest generalities of Science by the application of the positive Method, and the complete displacement of Theology and Metaphysics. The peculiar character he impresses on it by his thorough working out in detail of the Law of Evolution, a law which Schelling said was the peculiar creation of Modern Thought, and which the Germans have worked out with great success in almost every direction, constitutes a real claim to our admiration; but the Positive Philosophy will absorb all his discoveries, as it will absorb all future discoveries made on its Method and in its spirit; rejecting certain *à priori* and teleological tendencies which he sometimes manifests, and disregarding his failures as it disregards the failures of Comte and every other seeker.

Am I claiming too much for the Positive Philosophy in claiming for it whatever the future may produce? To claim it for Comte would indeed be preposterous; but to claim it for that Philosophy which it is Comte's immortal glory to have extricated from the products of all the past, is only to claim it for HUMANITY.

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